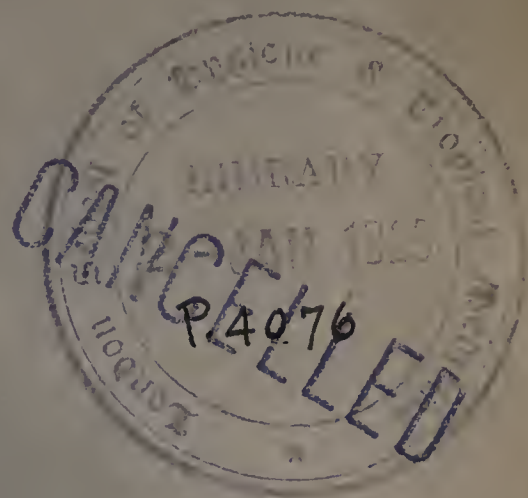


*With the Compliments of the
Director of Public Health, Burma*



Report

on the

Public Health Administration of Burma

For the Year 1923

Rangoon: Supdt., Govt. Printing and Stationery, Burma

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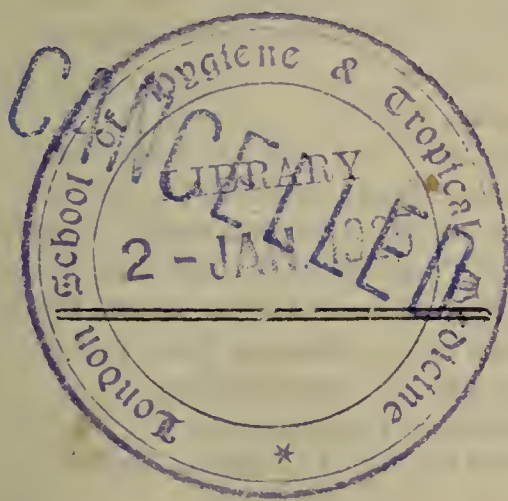


Report

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For the Year 1923



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RESOLUTION
ON THE
REPORT OF THE PUBLIC HEALTH
ADMINISTRATION OF BURMA

For the Year 1923.

Extract from the Proceedings of the Government of Burma, Department of Public Health,—No. 174S24, dated the 5th August 1924.

READ—

The Report on the Public Health Administration of Burma for the year 1923.

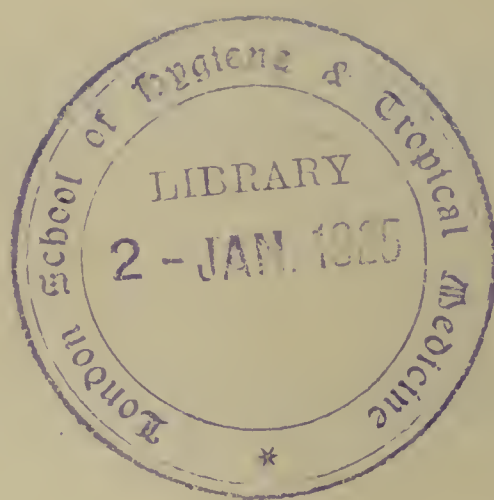
RESOLVED that—

The Report be published.

By order of the Government of Burma (Ministry of Education, Local Government and Public Health).

J. CLAGUE,

*Secretary to the Govt. of Burma,
Dept. of Edcn., Local Govt. and Public Health.*



REPORT

ON THE

PUBLIC HEALTH ADMINISTRATION OF BURMA

FOR THE YEAR 1923.

(Sections I to IV are, as usual, omitted in compliance with the instructions contained in Government of India, Home Department, letter No. 9 (Sanitary) 260, dated the 4th September 1878. Section VII is separately reported upon and Section VIII is not controlled by this Department.)

SECTION V.

General Population and Vital Statistics.

Area and Population.—The returns of certain districts in which a system of registration of Vital Statistics by tallies was introduced in 1922 have not been found sufficiently accurate to include in this year's figures and they have therefore been omitted, so that the area and population of the province now dealt with remains the same as in the past. Of newly constituted towns, Sitkwin after six months' existence has ceased to be a notified area under a Town Committee, while incomplete returns for Myinmu have been submitted. The figures for these are therefore included in the returns of rural areas of their respective districts. Minbya in Akyab District has furnished figures for the full twelve months. This town finds a place in Statement VI B, and the rural and the urban populations of the district and the Province have been readjusted.

2. *Immigrants and Emigrants.*—The total number of persons who arrived in this country by sea in 1923 was 3,82,724 or 22,686 more than that of 1922. Emigrants numbered 2,95,320 or 15,011 less than in the previous year. The increase in population by excess of immigration over emigration was 87,404. There was a small increase of 106 in the Mergui population on this account, but every other port except Rangoon has recorded a decrease in this respect. Rangoon showed nearly a lakh of incoming passengers by sea in excess of outgoing. Four males and one female left Bassein port for over-seas, but no immigrants by sea are shown.

3. *Rainfall and Price of Food.*—There has been a heavier rainfall recorded this year in most stations, the only notable exceptions being Tharrawaddy, Kanpetlet, Mônywa and Minbu. Rice was also sold cheaper in Upper Burma and in most of the Lower Burma Districts,

Arakan Division being the chief exception. No detailed connection can be traced in this year's figures between the price of rice and the death-rate, although the latter is lower this year.

4. *Comparison with other Provinces.*—The Central Provinces with a birth rate of 45·63, holds the record this year and is closely followed by the Punjab with 43·16. If the North-West Frontier Provinces and Assam be left out of consideration, Burma with 29·51 returns the lowest birth rate. It is some satisfaction to note that it also registers the lowest death rate of any Indian province, but for reasons discussed elsewhere in this report neither rates can be accepted as accurate. The recorded infantile mortality rate (184·09) is exceeded only by the Punjab and the Central Provinces.

5. *Vital Statistics in Railway Limits.*—In a railway population of 6025, mostly living outside municipal limits, 122 births and 63 deaths were registered, the ratios being 20·25 and 10·46 respectively. This is a better record than last year when the birth rate was only 14·56 and death rate 9·32. The highest birth rate (49·30) was returned from Myingyan and this was followed by Insein (47·72), Lower Chindwin (33·82), Henzada (28·51), and Meiktila (25·45), Tharrawaddy and Mandalay returned no births while Pegu and Kyaukse returned each a birth and a death. The highest death rate (26·79) was from Sagaing the next being Insein with only 14·52.

6. *Inspection of Birth and Death Registers.*—Of the 13,331 villages and towns under registration, 10,241 were inspected by the Civil Surgeons and Vaccination Staff as compared with 8,445 in 1922 ; but the number of entries verified amounted to only 247,246 as against 262,674 last year. District Officers visited 6,881 villages and verified 90,494 entries. The omissions detected by the former officers numbered 1,230 and by the latter 249. The Vaccination Staff of Pegu District detected 115 omissions in a verification of about 10,000 entries, while in Henzada only 52 omissions were reported in nearly 22,000 entries verified. On the other hand, the Vaccination Staff of Ma-ubin District detected 88 omissions in 3,436 entries and the district staff thereof 55 omissions in 4,919 entries. In Upper Burma, Yamèthin and Lower Chindwin appear to be the only districts where any regular verification work was done. Districts from which no omissions were reported were Toungoo, Bassein, Myaungmya, Tavoy, Minbu and Maymyo Subdivision. In Akyab, Hanthawaddy, Magwe, Tharrawaddy, Pyapôn, Sagaing and Mandalay the District Officers detected a few omissions here and there but no methodical work appears to have been done.

7. *Tally System in backward Districts.*—Reports of results of registration of births and deaths by the system of tally sticks in the backward areas introduced in 1922 are conflicting. The Civil Surgeon, Chin Hills, remarks : "The system is working well and, considering its simplicity and crudeness, I am of opinion that there is a good amount of accuracy in the headmen's returns." On the other hand the Medical Officer of

the Hill District of Arakan found results "Very disappointing." In fact the headmen "hardly utilized the tally sticks given to them for the purpose" as "they could not distinguish the various tally sticks which were a puzzle to them." The Medical Officer states that the ten-house-gaung generally reported verbally the births and deaths to the headmen who also occasionally went round the villages at the end of the month and made enquiries. The information thus collected was reported verbally by the headmen to the officer in charge of the police-outpost. Omission to report births is stated to be more frequent than to report deaths since in this district in the case of deaths a ceremony accompanied by an elaborate feast is invariably held and the occurrence is made public. The same cause apparently holds good for the excess of deaths over births in all but one circle of the Salween District, another of the backward tracts to which the tally registration was extended. The Deputy Commissioner remarks that the vital statistics of the district are not worth the paper they are written on. Similarly Pakôkku Hill Tracts have returned 705 births and 1,114 deaths which, according to the Superintendent, cannot even be considered approximate. In his opinion the practice of collecting vital statistics returns by the use of coloured tallies is not a success and never will be, in so far as there is no check on the system.

The following remarks of the Civil Surgeon, Bhamo, apply with equal force to several hill districts to which the system of registration has lately been extended with disappointing results: "Indifferent road communications, the annual flooding of large tracts of the country, heavy monsoons, ignorance and unfamiliarity of headmen with an innovation, and, last but not least, the heavy incidence of Malaria in all jungle village-tracts, have contributed in due proportion toward this result."

Birth and death figures obtained under such conditions are tabulated in Statement II (a).

8. *Effect of the abolition of the Police Beat Patrol System.*—Frequent delay was experienced in the receipt of vital statistics returns even when the duty of collecting the foils devolved on the beat patrol. This agency was abolished with effect from 1st October 1923 and the inevitable result has been that the whole system of collection of vital statistics has been seriously disorganised, temporary arrangements made by Deputy Commissioners having broken down in the majority of cases. The returns of several districts as far back as August 1923 had not been received in my office on the 1st May 1924, while those of two circles of Mônywa Township, Lower Chindwin District, for the twelve months of 1923, did not reach my office till 24th April 1924.

The Deputy Commissioner, Yamèthin, issued an order that counter-foils of vital statistics were to be brought by headmen to the monthly Headmen's meetings, collected there, and forwarded to the Township Officers, but this order was not carried out in all cases. In Pyapôn

Statements
III & VI-A

District counterfoils were sent by post where there was postal communication. In some cases headmen arranged to send them to Township Officers by special messengers. A majority of headmen in outlying villages however kept the foils with them until collected by touring officers. The Deputy Commissioner, Prome, arranged with the Divisional Forest Officer, Henzada-Ma-ubin Division, to get the counterfoils of the forest areas in Padaung Township collected by the agency of the forest subordinates. The foils thus collected were sent to Henzada, entailing confusion and delay. In Kyaukpyu Vaccinators and Township Officers were requested to collect counterfoils with no more satisfactory results. The returns of Toungoo extracted below furnish clear indication of the extent of dislocation in the disparity between the returns of Circles with similar populations :—

Toungoo District.

Circles.		Population.	Births.	Deaths.	Total for whole district.		
					Year.	Births.	Deaths.
Leiktho	...	16,922	97	51	1920	9,800	9,327
Ohgon	...	16,636	1,060	659	1921	9,167	6,244
Toungoo	...	20,743	57	20	1922	9,001	6,985
Kyaukkyi	...	23,736	457	356	1923	8,107	5,470

In Pakôkku District although deaths from epidemic diseases and fevers were heavier than in 1922 an appreciable fall due probably to change in the system is discernible. Equally unsatisfactory results are noticed in other districts as shewn below :—

			Akyab.		Magwe.		Minbu.	
			Births.	Deaths.	Births.	Deaths.	Births.	Deaths.
September	...	1922	1,444	1,716	993	619	904	582
		1923	1,472	1,254	533	377	475	400
October	...	1922	1,086	1,200	1,090	751	904	607
		1923	615	465	378	236	380	267
November	...	1922	1,474	1,316	977	736	1,020	672
		1923	778	570	585	449	913	604
December	...	1922	1,394	1,188	960	800	1,040	1,045
		1923	1,295	803	1,374	895	1,021	910

After careful consideration, the Local Government decided to make the village headmen themselves responsible for the production at the nearest police-station of birth and death counterfoils, without at the same time imposing on them any undue burden. The scheme is that headmen

send in their returns periodically according to the distance of their villages from the nearest police-station on the following scale :—

From villages within 5 miles of a police-station	...	...	Monthly,
From villages over 5 miles and under 10 miles from police-station			Bi-monthly.
From villages over 10 miles from police-station	...	...	Quarterly.
From distant village-tracts	...	...	Six-monthly.

In order to minimise delay the returns will hereafter not pass through the Commissioner's office, but will be forwarded direct by the Deputy Commissioner to the Director of Public Health. An improvement on the existing orders carried out during the year was that whereas previously no time limit was prescribed for the report by a householder of a birth or death in his family, the period has now been limited to 15 days. The proposed centralisation in district headquarters of statistics compilation work referred to in a previous report has been abandoned by the orders of Government.

9. *Need for accuracy in Registration.*—The causes for the admitted inaccuracy of registration are many and varied. The Civil Surgeons, Meiktila and Ma-ubin, think that where a headman has to record births and deaths of several villages the registration is bad, and believe that registration is more satisfactory in smaller villages than in the larger. In Thatôn the cause of non-registration of deaths in some cases was that the people were too lazy to go to the *thugyi's* headquarters to report. The Civil Surgeon, Shwebo, suggests that *ywagaungs* should be authorized to register domestic occurrences, but the Deputy Commissioner does not think that registration by this arrangement will be more accurate or more complete as the *ywagaung* is relatively less efficient than the *thugyi*. He says that no village in a village-tract is more than two miles from the headman's house and that it is not asking too much of a Burmese villager to make this journey once a year at most. Apart from other considerations it is necessary that every resident, whether in town or village, shall come to realise that he has obligations to the State and the Community, which he must carry out if Burma is to be regarded as a civilised country from the point of view of state medicine. Vital Statistics form the basis of all state medicine and accurate figures are essential to progress. Deaths are better reported on the whole than births, because an unreported death may lead to a police case and difficulty is experienced in disposing of the body. It is necessary that more inducement be offered to report births. In other countries a Birth Certificate is a definite asset to an individual ; it must be made so in Burma. A Birth Certificate can be made useful in many ways such as to prove age, to enter a school, college or university, to apply for employment, to prove the right to an inheritance, to get married, to obtain passports, to prove parentage, to comply with the requirements in any Court. It is hoped that increasing use of the document will be made in Burma and that employers, Government and private, school and college authorities and Law Courts will demand its production

whenever possible, and offer facilities to those who are able to produce it. If this were done its value would very soon come to be realized, and the registration of births would speedily improve. The greatest immediate help in this direction can be given by school authorities who should demand a Birth Certificate from every child first entering school. A difficulty in Burma is that children are not usually named until a varying period of from 1—6 months after birth. This difficulty can be surmounted by recording the birth in the permanent register at the time of occurrence, leaving a blank space for the name, and issuing the certificate to the parents or guardians only after they have fully reported the name to the Registrar.

It is not only in out-of-the-way districts that registration is bad, for the figures from villages near Rangoon are no better. The Deputy Commissioner, Pegu, remarks that registration of births and deaths appears to be faulty, and is of opinion that administrative officers might do more than they apparently do, to ensure completeness and accuracy. There is little doubt that touring officers generally have done very little hitherto to check the births, deaths, epidemic and vaccination figures of the villages they inspect; while the work done by the supervising officers of the Medical Department cannot be satisfactory so long as their duties are so multifarious, and public health work has so frequently to take a second place to their medical work. There has been no full time district staff under the orders of my department, and Vaccinators and Inspectors of Vaccination, who were until recently directly under this department, require careful and close supervision in order to obtain good results. It is hoped that in the near future a certain number of Assistant and Sub-assistant Surgeons will be posted to my department for district work and then some real improvement should take place, provided they are supported in their efforts by local bodies and administrative officers.

Several district councils, following the examples of Tharrawaddy and Thayetmyo, are desirous of having the Vaccination Acts extended in their districts and have applied to Government for sanction. This is a step in the right direction but if it is to be a success we must have more accurate registration of births in Rural districts.

10. *Graph I illustrates the Provincial Birth and Death-rates from 1865 onwards.*—Births, deaths and infant deaths in the province numbered 319,409, 225,883 and 58,799 respectively and the rates, compared with those of the previous two years, are exhibited in the following table :—

	Rural.			Urban.			Total Provincial.		
	1921.	1922.	1923.	1921.	1922.	1923.	1921.	1922.	1923.
Birth-rate ...	30·32	30·17	29·90	26·17	25·89	26·48	29·85	29·69	29·51
Death-rate ...	19·66	20·23	19·02	35·55	38·02	35·45	21·45	22·23	20·87
Infant Mortality rate.	160·37	174·49	172·24	278·84	284·72	289·80	172·06	185·30	184·09

11. *Births*.—High rates were returned for rural areas by Kyaukse (38'10), Tavoy (38'06), Yamèthin (37'92), Lower Chindwin (37'87), Pakôkku (37'16), Sandoway (36'47), Shwebo (35'19), Mandalay (34'68) and Henzada (34'04) and low rates by Kyaukpyu (21'19), Pyapôn (22'08), Bassein (23'75) and Toungoo (23'16). The districts of the Rangoon and Irrawaddy Divisions show an increase over the last year's rate and those in the Arakan, a decrease. Other districts showing increase are Prome, Henzada, Thatôn, Tavoy, Lower Chindwin, Yamèthin, Myingyan, and those recording a fall, Tharrawaddy, Pegu, Toungoo, Thayetmyo, Amherst, Mergui. There has been an increase in the towns of 858 births consisting of 476 male children and 382 female children. Towns which show high rates for Lower Burma are Kawkareik 36'59, Henzada 33'02, Tavoy 32'13, Wakema 31'49, and Thonze 31'39; while very low rates have been returned for Nattalin 11'23, Syriam 12'97, Letpadan 14'44, Insein 15'38, Thayetmyo 15'51, Akyab 17'77, Rangoon 17'91 and Kyaiklat 19'08. Kawkareik has headed the list for the last three years whereas Nattalin has remained consistently at the bottom. The low rates at Insein, Syriam, Akyab, Rangoon and Kyaiklat are due to the great disparity in the sex population—*vide* Table (below).

			Males.		Females.	
			1921.	1911.	1921.	1911.
Rangoon	...	...	236,689	208,111	105,273	85,205
Akyab	...	...	27,693	29,509	8,876	8,384
Insein	...	...	9,520	10,046	4,788	3,946
Syriam	...	...	11,741	8,434	3,452	2,463
Kyaiklat	...	...	5,600	5,042	3,624	3,396

In Upper Burma, Myitnge, has again topped the list with a ratio of 61'65; and the newly constituted town of Ye-u, which began its career with the fine rates of 49'23 in 1921 and 57'26 in 1922, comes next with a figure of 54'70 in 1923. Mandalay follows with 47'14, then Sagaing and Taungdwingyi with 36'85 and 36'00 respectively, and to the credit of Upper Burma it may be said that out of a total of 20 towns only 4 return rates below 25 and none below 20—the lowest for Upper Burma being Pyinmana and Pyawbwe with 21'36 and 21'68 respectively. Maymyo has returned a higher number of births than ever before and its death-rate is also much less than the average for the previous five years.

The low birth rate of towns like Nattalin and Thayetmyo must be due to non-registration of a number of births. The Civil Surgeon, Thatôn, remarks that the low number of births registered at Kyaikto can hardly be taken as accurate for a town of that size.

At Thayetmyo especially the birth rate is so low that there is no doubt that many births go unregistered. The only check on the accuracy of the headmen's registers is that occasionally exercised by the municipal

vaccinator and this is obviously insufficient. This Municipality does not even employ a qualified Sanitary Inspector, and the Committee holds the amazing opinion that the verification of deaths can be more efficiently carried out by a Conservancy Inspector than by a trained Medical man. Such a view can only be held by persons grossly ignorant of elementary principles or callously indifferent to the claims of public health. It is noteworthy that the Committee declines to co-opt the Civil Surgeon, the one man on the spot who could help them, as a member. Tharrawaddy, Toungoo, Thatôn, Myaungmya and Moulmein have recorded a higher percentage of births than last year, and it appears that the rise has been due mainly to better supervision and checking of birth registration. In Pyu the ratio of births last year was 13·63 whereas this year it has increased to 22·47 : the rise being attributed not merely to better supervision and checking, but also to the fact that a whole time Registrar has been employed during the year. Similarly the Sub-Assistant Surgeon at Kawkareik kept a close watch on the incidence of births with a view to enforcement of the provisions of the Vaccination Acts, and this resulted not only in an increase in vaccination but also in ensuring accurate registration.

12. *Still Births*.—There were 36 more still births recorded in towns this year than last. Eleven towns of Lower Burma contributed 768 such births, while eight towns of Upper Burma have accounted for 504 cases. Rangoon with 498 cases and Mandalay with the very high number of 419 have altogether accounted for nearly 75 per cent. of the total number of cases recorded. The following five districts recorded 439 still births :—

Amherst (122), Shwebo (66), Kyauksè (112), Magwe (98) and Minbu (41).

Mothers who died of childbirth number 346 ; of these 77 were at Mandalay, 26 at Moulmein, 21 at Rangoon, 19 at Myingyan, 17 at Bassein, and 15 at Henzada. The total births, including still births in Urban Burma were 33,498 so that the death rate from child-birth is 10·33, a figure which when compared with English standards of about 4 per thousand makes one realise the great need for maternity work in this country.

13. *Deaths*.—It is not proper to compare this year's rate with the mean of the last five years as the latter is vitiated by the abnormally heavy mortality from the influenza pandemic of 1918 and 1919. The correct procedure should be either to compare with the five year's mean previous to 1918 or the mean of five year's excluding 1918 and 1919. For my present purpose however, a comparison with last year's rate is considered sufficient.

Most of the districts have had a healthy year, the only exceptions being noted below together with the cause of the increased mortality.

Tavoy (fever), Sagaing (plague and fever), Lower Chindwin (plague and fever), Mandalay (cholera and plague), Kyauksè (plague and fever), Yamèthin (small-pox and fever), Minbu (small-pox and fever).

Very low death-rates have been returned for Amherst (12·72 against 15·54 in 1922), Bassein (14·79 against 16·56) and Pyapôn (14·80 against 15·60). In Amherst there is a considerable decrease in birth, death and infant mortality rates and the Civil Surgeon very properly attributes this to faulty registration. Verification is done only by Vaccinators and Inspectors of Vaccination, and the Township Officers do not appear to have exerted themselves at all in this direction. The Inspector of Vaccination, who was on leave for a long period detected 21 omissions of births in 4 months. The Moulmein Circle, with a population of 75,795 is reported to have had only 510 births (6·72 per mille) and 352 deaths (4·64 per mille) while Kyaikkami with a population of 29,821 had 891 births (29·88) with 355 deaths (11·90). The Civil Surgeon, Bassein, remarks with reference to the low death rate in his district that he has grave doubts of the figures and thinks that deaths are frequently omitted. This is made plain by the disproportionately low figures for 1923 returned by some of the circles, especially those devastated by the floods, as compared with the two previous years, *vide* below:—

Police-station.			Deaths.		
			1921.	1922.	1923.
Thinbawkyin	...	...	750	812	451
Kangyidaung	...	...	525	624	403
Yëgyi	...	...	331	409	322
Kyonpyaw	...	...	737	718	451
Ataung	...	...	779	709	571

There can be little doubt that many deaths have passed unreported in this district. There has been no Assistant Health Officer or Sub-Assistant Surgeon on permanent sanitary duty in the district and owing to his numerous duties at Headquarters, it is not easy for the Civil Surgeon to remain away long on tour. An Assistant Surgeon has since been posted (in April 1924) as Assistant Health Officer of the district with instructions to make systematic inspection of villages and submit reports periodically.

The low death-rate of Myingyan is due to the absence this year of any of the severe epidemic diseases which characterized the preceding year when many cases were wrongly returned as "Fevers." The Civil Surgeon affirms that registration of deaths is defective and the deaths of children under one year of age are seldom, if ever, recorded.

14. *Urban Death Ratios.*—The urban Provincial death rate of 35·45 compares favourably with those of 1922 (38·02) and 1921 (35·55). Some towns show death rates much in excess of their five year means, and

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this is due in most cases to the prevalence of epidemic diseases like plague, cholera and small-pox. Among the towns of Lower Burma, Prome as usual heads the list with a rate of 55·09 and Kyaiklat follows with 50·74. Prome is a town which is not of good repute as regards its sanitary conditions ; judged by all the usual criteria its health is very bad. Plague appears to have become endemic and other diseases flourish. The best hope for the town is to appoint a full time Medical Officer of Health and to delegate to him wide powers to deal with insanitary conditions. There is no use in appointing a capable man and then muzzling him. Noticeably high rates were returned by Thonze 47·32, Wakema 47·71, Allanmyo 41·71, and Myanaung 42·22, all above the five years' mean rates. Pegu's rate, 46·41, is much below its previous five years' mean of 49·63.

The little town of Myitnge in Upper Burma again tops the list with a rate of 57·87 and Yenangyaung, as in the case of births, comes next with 56·65. Pyinmana records a rate of 48·23 and Mandalay follows with 47·78 which is a little higher than its last year's return of 45·41 but well below its previous five years' mean of 55·04.

The lowest rates are returned by Syriam 18·10, Akyab 20·84 and Nyaung-u 13·96. The Civil Surgeon, Myingyan, remarks that death registration at Nyaung-u more especially of young children, is obviously defective. In the case of Syriam the accuracy of the figures may be accepted as being due to the satisfactory sanitary improvements effected therein. In this connection the Civil Surgeon remarks—

“ . . . much progress has been made in road making, in the extension of water supply, and in laying new drains. . . . A new vegetable market was opened and an old building renovated to provide much needed accommodation for fish sellers. . . . ”

According to the Commissioner, Arakan Division, “ the sanitation of Akyab Town is most unsatisfactory and the Municipality is negligent and careless of its sanitation.” My personal inspection in part confirms this ; and I regard the recorded death rate as much understated. The Civil Surgeon remarks that infant deaths are rarely reported. Also the rates are worked out on the census population of 1921, which includes many Indian immigrants who had flocked to the town during the paddy harvest season, for a brief stay of only a few months.

In response to representations urging the necessity for deaths being verified by qualified medical men with a view to prompt detection of infectious diseases, the Municipal Committees of Toungoo and Meiktila have employed the Sub-Assistant Surgeons of the Local Civil Hospital on this work ; while the Committees at Pyinmana and Thayetmyo have declined to change their present defective systems. Only some 20 of the 65 towns appear to have deaths verified by Sub-Assistant Surgeons. The list is however incomplete in many respects and details have been called for. The Municipal Committee, Moulmein, which abolished the appointment of Medical Registrar when the then incumbent resigned

his place in June 1922, has distributed his work among three Sanitary Inspectors who are obviously as unfitted to verify the cause of deaths as they are unqualified to grant death certificates. The Commissioner, Tenasserim Division, remarks that the Moulmein report makes gloomy reading and finds sad features in an insufficient water supply, inadequate conservancy, bad drainage, poor milk supply, and a general disregard of bye-laws, especially with regard to buildings and lodgings.

Prome, Thônzè and Myanaung owe their high death rates to plague, and Kyaiklat to fever and cholera. In Allanmyo (41·71) though plague accounts for 6·69 and fever for 5·26 the unascertained "other causes" claim 20·50 per mille. As for Wakèma (47·71) both small-pox and cholera played a part in causing a heavy death rate. Fortunately plague did not occur although the town sanitation is reported bad. The infant mortality rate here (342·11) has been the worst since 1910. Yenangyaung (56·65) which comes second has suffered most from small-pox (14·61) then fever (8·51) while miscellaneous headings contribute 24·28. In Mandalay and Pyinmana the ratios are swelled by plague. In 5 out of the 45 towns of Lower Burma and 4 out of the 20 towns in Upper Burma, the column "All other causes" accounts for over 60 per cent. of the respective death rates. Notable among these is, as we would expect, Thayetmyo; Pakôkku and Myitnge are also high. This high figure for "All other causes" indicates wrong classification and bad verification of the cause of death. The new model bye-laws for registration of births and deaths have been adopted in the following towns :—

1. Zigôn.	10. Yamèthin.	19. Pyinmana.
2. Ngathaingyaung.	11. Syriam.	20. Allanmyo-Ywataung.
3. Insein.	12. Thônghwa.	21. Minbu.
4. Mergui.	13. Pakôkku.	22. Ma-ubin.
5. Bhamo.	14. Moulmein.	23. Shwebo.
6. Kyaikto.	15. Yenangyaung.	24. Maymyo.
7. Kyauksè.	16. Myingyan.	25. Henzada.
8. Salin.	17. Magwe.	26. Danubyu.
9. Myanaung,	18. Meiktila.	27. Nattalin.

This is fairly satisfactory but many important towns still retain bad or ineffective bye-laws on this subject.

Chart II represents the number of deaths per 100 births in towns during the year. It will be seen that 16 towns out of 64 as against 9 in 1922, recorded fewer deaths than births.

Salin registered nearly 50 births in excess of the number of deaths in each of the years 1921 and 1922, but this year has returned only 214 births as against 244 deaths, or 30 less, though no deaths from any of the epidemic diseases were reported in any of these three years. The remarks of the Civil Surgeon in this connection are instructive and are reproduced below :—

"I have heard from many officers and laymen that there were many cases of small-pox in Salin which were not reported or detected. I have also drawn the attention of the Sub-Assistant Surgeon and the Municipal Authorities to the necessity of the

Sub-Assistant Surgeon personally verifying the deaths before certifying. I am almost sure that 9 deaths reported to be due to measles or "elephant chicken-pox" in adults were small-pox cases."

15. *Rural Infant Deaths*.—Children that died under one year numbered 49,460 as against 50,324 in 1922 and 46,474 in 1921. The highest rate, 241'93, was returned by Kyauksè District which ranked second last year but with rate 248'16, Sandoway having topped the list with 261'12. Other districts returning high rates were Pegu (234'10), Mandalay (231'06), Yamèthin (229'96), Minbu (221'10), Thayetmyo (214'63), Prome (214'12) and Sandoway (211'19). Mergui returned the lowest rate of 92'32 which however is higher than its figure for last year, *viz.* 83'65. Amherst is another district with less than 100 per mille, its rate being 99'08. Tharrawaddy, Tavoy, Thatôn, Myingyan, Ma-ubin, Lower Chindwin and Hanthawaddy had rates between 100 and 150. The rate of Tharrawaddy had a fall from 217'97 in 1922 to 206'67 this year, but if the statistics of the towns be included the ratio works out to 206'31 as compared with 220'95 in 1922.

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16. *Urban Infantile Mortality*.—This year's Urban Provincial Infantile Mortality rate of 289'80 (males 310'15, females 268'26) is higher than that for the previous year (284'72). From all the towns of Burma 5,138 male children and 4,201 female children, making a total of 9,339, are reported to have died. Towns returning very high ratios are Myingyan 508'27, Thayetmyo 413'17, Pyawbwè 411'76, Prome 376'67, Kyaiklat 369'32, Myitngè 367'92, Yenangyaung 366'53, Pyinmana 364'78 and Shwebo 364'24. All these nine towns have returned a rate of 25 per cent. or more above the provincial rate. Thirteen other towns have reported rates higher than the Provincial average. Prominent among them are Mergui 350'60, Wakèma 342'11 and Rangoon 341'61. Twenty-three towns have recorded ratios between 200 and the provincial ratio, and the remaining twenty towns have rates under 200, particularly low rates coming from Pyapôn 84'58, Nattalin 90'91, Nyaung-u 108'28, Kyaukpyu 129'63, Kyan-gin 134'02, Zigôn 136'36, and Sandoway and Tharrawaddy each 142'86.

As has often been remarked, very high or very low rates, whether for birth or infantile mortality cannot be absolutely relied upon in Burma. Myingyan with a population of 18,931 has this year recorded the highest infantile mortality rate of 508'27. Only 210 male infants and 213 female infants were registered as born in the year, which gives an absurdly low birth-rate of 22'34. Pyinmana returns an infant mortality rate of 364'78, but its recorded birth rate is 21'36 which is obviously incorrect for a town with a population of 14,886 where the sexes are equally distributed. Without suggesting that the infantile mortality rate is good in either town it is obvious that in both the registration of births must be very defective. Kyaikto with a birth rate of 26'23 and with a numerical equality of sexes at birth (94 each) shows a male infant death rate of 457'45 as against a rate of 138'30 for females.

Thatôn with a registered birth rate of 28·49 and with an approximate equality of sexes at birth returns a male infant death rate which is about twice the female rate. Kyauksè in Upper Burma which has a fair birth rate of 30·13, as also a numerical equality of sexes at birth (92 each), returns a female infant death rate 60 per cent. higher than that of the male rate.

Pyawbwè, Pyinmana, Thayetmyo and Yenangyaung have not attempted any explanation of the high infant mortality rate which they have returned. This has been called for. The Shwebo report states that the registration of births has been unsatisfactory. The cause of increase in Moulmein is said to be uncertain but whooping cough was prevalent during the rains and probably was responsible for a number of deaths.

In Myingyan there was an epidemic of measles and chicken-pox, chiefly affecting children. Some of these cases died through complications such as pneumonia and bronchitis. The strong south winds that blow during the hot weather and carry about large volumes of germ laden dust are exceedingly trying to healthy lungs and the effect of these dust storms on already diseased lungs can well be imagined. The Civil Surgeon believes that child tuberculosis is common though cases are rarely seen in hospital practice. A wave of Dengue, or a fever allied to Dengue passed over the town during September, October and November, marked features being the absence of high temperature and of the typical "saddle back" phenomenon, the presence of marked erythematous rashes over the shins, swelling of the legs and of the suboccipital glands. The Deputy Commissioner wonders how the population of the town is maintained in view of the enormous risks which every one runs. The chief causes of the high death rate are also said to be "(1) carelessness, ignorance, lack of cleanliness and the barbarous method of 'Wun Swais,' —(2) Insanitary conditions prevailing in houses and their surroundings." Though the town has adopted the Model Bye-laws for registration of births and deaths it is disappointing to note that the recorded birth rate is so low. It is time that steps were taken to organise a society for the prevention of Infant Mortality in Myingyan, and to arouse the people to the importance of taking proper care of expectant and nursing mothers, and of infants during the first few years of life, and the municipality has been advised accordingly.

It is of interest to contrast the high infant mortality of Thayetmyo (413·17) with the comparatively low rate (223·83) returned by Allanmyo. These two towns are situated on opposite banks of the same river facing one another, and have an almost equal population. The number of births registered for the year under review for Allanmyo totals 277; whereas in Thayetmyo 167 only were registered. The general death rate of Thayetmyo is 31·76 and of Allanmyo 41·71. Looking at the various causes of deaths at Allanmyo we see plague (75 deaths) fever (59 deaths), dysentery and diarrhoea (30), respiratory diseases (51),

and small-pox (17) and out of a total of 468 deaths, only 230 are grouped under "All other causes," whereas in Thayetmyo, the only outstanding figure is 35 under the heading "Fever" and out of a total of 342 deaths, 278 (over 81 per cent.) are classified under "All other causes." Now turning to the infantile mortality figures Allanmyo records 62 deaths which give a ratio of 223·83 whereas Thayetmyo records 69 deaths which works out at a ratio of 413·17. The obvious inference is that registration of both births and deaths is badly neglected in Thayetmyo Town. In previous annual reports of this Department issued in 1908-1909 and 1910 this difference, which existed even then between these two towns was pointed out and various explanations were recorded, such as bad sanitation and the prevalence of congenital syphilis and mixed breeding in Thayetmyo. These explanations may hold good in part, but faulty registration is undoubtedly the principal cause of the difference.

A similar contrast was made between the two towns of Magwe and Minbu of Upper Burma situated on opposite banks of the river. Minbu always returned low figures whereas Magwe kept returning very heavy figures. In 1908 and 1909 the Director of Public Health attributed the high figures of Magwe to unsatisfactory registration, and in 1910 the District Officers admitted in the Annual Report that registration of births at Magwe was defective. There seems to have been a steady improvement since then in the conditions at Magwe, and this year's figures compare fairly well with those of Minbu. Pakôkku and Myingyan are two other towns, with almost equal populations situated on opposite banks of the river, Their respective figures are :—

		Popula- tion.	Births.		Total.	Birth Rate.	Death Rate.	Infant deaths.		Total.	Infantile mor- tal ty ate.
			Male.	Female.				Boys.	Girls.		
Pakôkku	...	19,907	281	261	542	27·78	28·09	90	66	156	287·82
Myingyan	...	18,931	210	213	423	22·34	30·80	116	99	215	508·27

17. *Infant Welfare Societies.*—The Burma Branch of the Indian Red Cross Society has been entrusted with the administration of the Child Welfare (Burma) Endowment Fund and contributions have been given by it in support of various Infant Welfare activities.

The Government of Burma has continued to support the Infant Welfare movement at important centres, and has financially assisted Societies at Rangoon, Mandalay, Moulmein, Taunggyi and Meiktila.

Reports regarding seven Societies show that they are in a healthy condition. The Deputy Commissioner, Thatôn, reports that the local

Society has not been working satisfactorily and is in need of a new Secretary. At Pyapôn a trained midwife was employed throughout the year but, for want of active female members, no other work was done. The midwife attended 86 of the 201 births that occurred in the town. Sandoway Society reports that it has insufficient funds to support a midwife of its own but hopes that the Municipality will assist. The Syriam Society apparently collapsed on the departure of Mrs. Ward Perkins. No report has been received of its resurrection.

Rangoon.—The Society employed nine nurse-midwives, a matron for the Lady Craddock Shelter at Pazundaung and a lady doctor. The midwives attended 1,409 pregnancies, 12 serious cases being sent to the Dufferin Hospital. Six hundred and seven boys and 604 girls were born alive, and there were 47 still births and 156 miscarriages. The Society's returns show only 60 infants as dying before the first year of life. The Society is to be congratulated on its low Infant Mortality of only 49·5. The Lady Craddock Shelter has been extended by the addition of another shelter. Lands were acquired at Ahlone for two buildings one for a baby hospital ward, and the other for a maternity shelter. The buildings have been constructed, Government contributing Rs. 1,000 towards the cost. In March 1924, His Excellency the Governor opened the Mrs. Chan Mah Phee maternity shelter at Ahlone, a generous gift of Mr. Chan Chor Khine and his brothers.

Mandalay.—The total number of cases attended by the Society's Lady Superintendent and four midwives was 572 as against 484 of the previous year. Five hundred and twenty-six were live-births of which 69 infants died, giving an infantile mortality rate of 131 per mille. Seventeen cases of difficult labour were attended by the Honorary Surgeon of the Society. This year's outstanding feature was the holding of Baby Week. Many members of the Society took a keen interest and it has been suggested to amalgamate this Society with other local associations engaged in similar work and to form one united body called "the Maternity and Infant Welfare Home."

Moulmein.—Two hundred and eighty-eight cases of confinements with 271 live-births, 11 still-births, and six abortions were attended by the Society's midwives. Three of the mothers are reported to have died, and the number of children that died under one year was 19. The Infant Mortality rate of the Society's babies (70·1) is only a quarter of the general rate in the town.

Thongwa.—A Results System midwife was entertained and out of 235 births registered she attended 121. The number of babies that died was 22, while there was no death among the mothers.

Taunggyi.—The number of confinements attended was 59 out of which 23 were treated in the Maternity Home and 36 were outside cases. The principal event of the year was the laying of the foundation stone of the new maternity home by His Excellency the Governor.

The Society which was formerly working only for the Southern Shan States acts now for the whole of the Shan States at the special request of the Northern Chiefs who have most generously donated Rs. 4,000 towards building the maternity home, and have promised to contribute Rs. 1,500 annually towards the cost of staff. The work of teaching probationers has made great progress.

The Society at *Mônywa* has secured the services of a duly qualified midwife, and it is reported that her work is very encouraging. In addition to visiting the homes of all newly-born babies and following up weakly babies the nurse has attended some difficult cases of confinement. A diary is kept which shows that in all 2,246 visits have been paid by the Society's nurse.

A report has also been received from the Society at *Kyauksè* regarding the nature of the work done there, which consists in visiting the people in their houses, and the issue of garments and other necessities to those in need, and also giving necessary advice and instructions to expectant mothers.

Meiktila.—Government contributed Rs. 2,500 and the Municipality Rs. 640 to this Society, and the new Maternity ward was opened during the year. The midwife attended 226 cases out of 279 births in the town. The Branch Society at Thazi also continued its work.

SECTION VI.

History of Chief Diseases.

Chart III indicates monthly incidence of Cholera, Small-pox and Plague in Burma since 1905.

18. Deaths in the registration area from the three principal epidemic diseases cholera, small-pox and plague numbered 1,488, 2,846 and 7,606 as against 5,047, 1,439 and 7,282 in 1922. The rates were :—

	Cholera.			Small-pox.			Plague.		
	1923.	1922.	Five years mean.	1923.	1922.	Five years mean.	1923.	1922.	Five years mean.
Provincial ...	·14	·47	·58	·26	·13	·19	·70	·68	·60
Rural ...	·11	·34	·51	·21	·10	·13	·30	·18	·15
Urban ...	·39	1·52	1·13	·71	·38	·72	3·86	4·63	4·12

19. *Cholera* declined appreciably in the Province, the Delta Districts of Ma-ubin and Pyapôn and the Mandalay District of Upper Burma being the only areas in which the disease became epidemic. In the two Delta Districts it prevailed between February and May, while in

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Mandalay District, November and December were the worst months. Pakôkku District was free from the disease till 26th November 1923, when cases occurred almost simultaneously in the villages along the banks of the Irrawaddy, in a few villages not far from that river and also in two villages in Myaing Township. The infection was in every case brought from Pagan in Myingyan District where people from Pakôkku District had congregated for a big pagoda festival. The epidemic was soon brought under control. In Bhamo District there were severe epidemics in September and November; in the former month cholera broke out in the Myothit area, centering on a group of villages on the Taiping. The disease was imported from China and as far as could be ascertained was water-borne. The low Kachin Hill-tracts were affected in November, a considerable number of deaths occurring in a group of scattered villages. Infection was introduced from Shwegu, where cases of cholera were occurring. The riverine town of Shwegu continued to report cases of cholera throughout the rains *i.e.*, June to November. Notwithstanding all advice to the contrary, the inhabitants of this town persisted in drawing their water supplies from the river, at the upper end of the Town where there is a back water, and it was from amongst the people who used this water that the bulk of the cases occurred. Every thing that was possible short of actual physical restraint was carried out, and the incidence kept as low as possible.

In Myitkyina District, Chlorination of drinking water was carried out in the cholera season of 1923 in one village, near Sinbo (river area). The Civil Surgeon hopes to give this method a more extensive trial in the hot weather, and all out-post Hospitals, and Dispensaries, have been supplied with a Horrocks' water testing apparatus, and a supply of bleaching powder.

Cholera was less prevalent in towns than in the previous year and accounted for 470 deaths as against 1,839 in 1922. The delta towns of Pyapôn, Kyaiklat, Wakèma, Moulmeingyun and Yandoon returned high cholera death rates while the towns in the Arakan, Rangoon, Tenasserim and North-West Border Divisions were practically free from the disease. Cholera began at Pyapôn on the 14th March and ended on the 18th May. The appalling congestion of the area near the Bazaar in which low class Chittagonians lived materially helped to spread the disease which accounted for no less than 74 cases. At Kyaiklat it prevailed between 8th February and 29th May and caused 93 attacks with 64 deaths. At Moulmeingyun 529 persons were inoculated with anti-cholera vaccine with gratifying results. Only one contracted the disease after a lapse of 9 days and he recovered. There were only 40 attacks in the whole town as against 81 in 1922. Rangoon and Prome had only 48 and 6 deaths respectively against 264 and 129 in 1922. Bassein and Pegu which had severe outbreaks in previous years were not infected with cholera in 1923, while Henzada

returned a single death as against 62, the average of the preceding 5 years. Kyônpyaw and Allanmyo remained entirely free this year in contrast to 73 and 42 deaths respectively in the previous year. The fact that a protected water supply is the surest means of reducing the incidence of cholera outbreaks is amply borne out by the graphs appended which show the cholera deaths in towns with piped water supplies before and after the introduction of the supply.

The Akyab figures as illustrated in the graph would be very much more striking were the 1919 outbreak excluded. In this epidemic infection was introduced from outside and spread largely by Chittagonian coolies many of whom are housed in an enclosure adjoining the Mahomed Bakshi mosque where there is an unprotected surface well and no latrines. It is of interest to note that a large proportion of the cases were coolies working in the mills beyond the area of piped water supply. Minbu which has a protected pipe water supply has had no cholera outbreaks of any magnitude since 1910, while the case of Mônywa is more striking still.

Mandalay registered 145 deaths from cholera, the largest number since 1909. Turning to the other water-borne diseases in this town, the incidence of enteric fever, from which there were 106 deaths during the year, shows an increase when compared with 88 in 1922 and 81 in 1921, and the Health Officer attributes the cause to contamination of the surface-well water supplies by surrounding latrines. Four hundred and twenty deaths from dysentery and diarrhoea in 1923 compare unfavourably with 335 in 1922, and 274 in both 1921 and 1920. The prevention of these diseases in Mandalay as elsewhere lies chiefly in the provision of a sufficient and safe water supply.

The Health Officer in discussing the water supply states that only four out of six tube-wells are in use, but that a scheme has been sanctioned by the Local Government for the extension of the Artesian supply which at present extends only to small areas of the town. Water from deep masonry wells, both public and private, which constitute the main source of water supply to the town, is stated not to have been found injurious to health. The water from the moat is reported to be used only for domestic purposes and hardly at all for drinking, and the use of that from the river is said to be limited to those living along the banks.

Until the provision of a pure piped supply the water supplies of the town must be regarded as open to pollution and the people advised to boil all drinking water.

20. *Small-pox*.—The riverine districts of Thayetmyo, Minbu, Magwe, Pakôkku and Myingyan suffered most from this disease, the infection in many cases having been spread by inoculators who were encouraged and shielded by the people. Proposals accompanied by draft rules framed under the Epidemic Diseases Act have been submitted to Government with a view to giving greater power to local authorities to deal with outbreaks of cholera and small-pox, somewhat similar

to the powers which exist under the plague rules. The unnecessary wastage of life caused by small-pox in these districts appears to have impressed District Councils and many of them have applied to the Local Government to extend the Vaccination Acts to their areas. Akyab, Rangoon, Pegu, Prome, Ma-ubin and Meiktila are other districts in which this disease claimed a fairly high mortality. The widespread prevalence of small-pox in Meiktila District, causing 369 attacks with 91 deaths is attributed by the Civil Surgeon chiefly to concealment of early cases, to the practice of inoculation, and to non-segregation of patients and contacts. He instances the case of Panaing Village which was infected in January but report of which was not made until February. The consequence was that as many as 234 attacks and 50 deaths occurred in this village alone. Kyaukpyu and Kyauksè are the only districts that escaped from the disease altogether. In Pegu, Prome and Meiktila about half the total deaths occurred among children under ten years of age who were mostly unvaccinated. Elsewhere small-pox prevailed largely among adults who were either vaccinated in infancy and not since, or not protected at all. The infection in Mergui was introduced by some traders of Victoria Point Subdivision, who went to Siam in November and returned with the disease. It was spread widely but was soon brought under control by a vigorous vaccination campaign. In Southern Shan States small-pox broke out in eight States and caused 695 attacks with 92 deaths as against 1,543 attacks and 207 deaths in 1922. *Pwès* and markets acted as diffusion centres. Lai Hwa was the first infected State but Mong Nawng headed the list with 283 attacks and 51 deaths. Persons vaccinated numbered 22,008 and 21,176 operations were successful. In the two previous years only 17,525 and 9,962 persons were vaccinated.

In Akyab District Buthidaung Township, mostly peopled by unprotected Chittagonian Mahomedans not amenable to vaccination, was severely affected. Of the 192 deaths for the whole district 102 occurred in this township. Maungdaw is another township of this type and the Civil Surgeon urges the extension of the Vaccination Acts to these areas to deal effectively with these recalcitrants.

Small-pox caused 861 deaths in towns as against 460 in 1922. Yenangyaung accounted for 139 deaths against 8 in 1922 and suffered more than any other town, its death rate from this cause having been 14.61. The last previous occasion on which this town had a serious outbreak was in 1912 when 82 deaths were reported. The interval of eleven years suggests that a population of inadequately protected persons has grown up since 1912. The Yenangyaung outbreak is a strong argument for compulsory revaccination. This measure, consistently urged by sanitarians, is often regarded by laymen in this and other countries as not within the bounds of practical politics. That this is not the case is shown by the fact that the Government of Madras has recently ordered that revaccination be made compulsory in the city

of Madras, apparently at the request of the Corporation of that town. The Rangoon Corporation also would be well advised to approach Government to obtain wider powers than they have at present. They ought at least to be in a position to enforce compulsory revaccination of contacts during a small-pox epidemic. Other towns returning fairly high rates are Minbya (4'30), Wakèma (3'43), Ma-ubin (3'23), Magwe (2'30), Yandoon (2'25), Minbu (2'04) and Pegu (2'02). All these towns showed this year their highest rate for over a decade. There were 28 deaths at Prome against 3 in 1922, 8 in 1919, 1 in 1916 and 242 in 1912; the intervening years were free. Pegu and Toungoo returned 38 and 13 deaths respectively after complete freedom for two years, while Zigôn, Minhla and Nattalin which showed high figures in 1922 escaped altogether this year. Taungdwingyi reported 9 deaths after a period of lull since its last severe outbreak of 1912 when 103 deaths occurred. It should take this small outbreak as a warning and overhaul its vaccination state.

The freedom from small-pox enjoyed by Minbu for a long period, except for a few sporadic cases in 1919, was rudely disturbed in 1923 when 56 attacks and 11 deaths were reported. The epidemic prevailed in other parts of the district as well and continued in Minbu Town into 1924. The Civil Surgeon attributes the blame both to the people and the vaccination staff. The vaccinators were reported by the Civil Surgeon to the President for disciplinary action, and a number of persons were prosecuted in the Magistrates' Court under the Vaccination Act. The Civil Surgeon also draws attention to the fact that voluntary revaccination has made little headway in the town.

The Civil Surgeon has been co-opted a member of the Municipality, but has not been invested with any power to control the sanitary and vaccination staff. This is of course an absurd position.

Colonel Entrican, when officiating as Sanitary Commissioner, found the conditions of the town most deplorable and has left on record a scathing condemnation in his inspection report. Affairs do not appear to have improved since then though a younger and more energetic officer was transferred to the station as Civil Surgeon. Nor has the recent severe small-pox epidemic in this and the neighbouring districts opened the eyes of the Municipal Committee to their responsibilities. As the Deputy Commissioner rightly remarks "unless the Municipality wakes up there is little hope of improvement."

21. *Plague*—The districts most affected were Mandalay (2'79), Prome (1'84), Sagaing (1'71), and Meiktila (3'18). In the two former the towns of Mandalay and Prome were the centres chiefly affected from which infection spread to the rural areas.

In most cases too little heed has been paid by villagers to the appearance in their village of the rat epizootic which invariably precedes human plague. In many instances information of rat mortality was

concealed from the Health Authorities, a short-sighted policy encouraged in some districts by the leaders of local *Wunthanu Athin*, who for reasons of their own decline to see any connection between rats and human plague.

Whenever a careful enquiry has been made by District Officers the existence of an unusual rat mortality before the onset of human plague has been disclosed. A proposal has now been made to Government to amend the plague rules so as to make it incumbent upon residents and village headmen to report unusual mortality among rats.

There were in Southern Shan States, West of Salween, 65 deaths from Plague as against 38 in 1922. This disease prevailed in Mali Village, Yawngkhwe State, for four months (January to April) without the Civil Surgeon hearing anything of it. It was only in May that the Hpongnyi of Iyaungban wrote and requested the Civil Surgeon to arrange for the inoculation of himself and his people. Several other villages in the Yawngkhwe State had deaths from plague and high rat mortality, but reports of these did not reach the Civil Surgeon till after careful enquiries were made. The 65 deaths were distributed as follows :—

Yaungkhwe State	... 28	Pindaya State	... 10
Samka State	... 18	Loi-an State	... 9

In all, 2,937 inoculations were performed as against 3,562 in 1922.

In Thatôn District cases occurred in Kawkadut and Taungzun where people tried their best to conceal them, but after much trouble 627 persons were inoculated and further spread of infection was stopped.

Plague also occurred in three other centres—Sittaung, Pa-an and Kyaikkaw, but owing to the amenability of the people and the valuable help given by some local gentlemen a good many inoculations were performed and a severe outbreak averted.

In Pakôkku District plague infection was, towards the close of 1922, carried to Mau-nge Village from Mônywa District by traders, and it took a firm root in that village and spread thence to Yesagyo. It was severe in February and March and subsided towards the end of April. In August, it made its appearance in a village called Kyigan in Myaing Township and caused 8 attacks with 7 deaths. The infection would appear to have been carried to Kyigan in foodstuffs which the villagers there used to get from Mau-nge and Yesagyo.

In towns plague was less severe this year, 4,694 deaths having been registered as against 5,608 in 1922. This Province is still in the grip of the prolonged epidemic which began with the advent of plague into Burma in 1905 since when no month has been free from it. The largest number of deaths occurred in Rangoon 1,159, Mandalay 877 and Prome 465. Rangoon is the chief endemic centre of Plague in Burma and one of the most important centres of plague dissemination in the East. Plague in Rangoon is closely connected with the rice industry and the numerous rice mills are very heavily infested with rats. Nearly 500,000 rats were destroyed in Rangoon last year. If we assume that

the normal rat population is double this figure we can arrive at an estimate of the enormous economic loss due to these pests. Taking the cost of feeding 1,000,000 rats at a half an anna per rat per day we get the figure of Rs. 31,250 per day, or rather over 114 lakhs of rupees a year as the loss, excluding other damage by rats, sustained by Rangoon in maintaining its rat population. Regarded from this point of view alone the rat proofing of rice and other grain stores becomes a problem of the greatest urgency. Only 17 out of the 65 towns returned no deaths from plague. Heavy mortality per thousand of population was recorded at Thônze (20·17), Prome (17·84), Pyinmana (16·46), Kyangin (10·90), Minhla (10·71), Meiktila (10·49) and Shwebo (9·90). As in previous years the Arakan Division, Tavoy and Mergui in the Tenasserim Division enjoyed immunity. Other towns that escaped infection were Syriam, Thônghwa, Kyaukpyu, Wakèma, Moulmeingyun, Kawkareik, Pakôkku, Nyaungu, Magwe, Minbu and Salin. Mandalay experienced a severe epidemic in the cold season of 1923-24 and although the Health Department anticipated the outbreak and organised measures to combat it, the public, in spite of warnings and exhortations, are stated to have remained apathetic, and would neither co-operate in the destruction of rats nor submit to inoculation. A Sub-Assistant Surgeon provided with magic lantern and slides who was sent by my Department to lecture on plague and its prevention in Mandalay Town met with a poor reception and disappointing audiences, very different from his experience in Meiktila last year. Evacuation in such a big city was out of question and the epidemic only abated on the onset of warmer weather. The immediate neighbourhood of the City was also severely affected although many cases appear not to have been reported.

Pyinmana experienced a severe outbreak, one of the worst since 1910 in the first quarter of the year under review. The Municipal President complains that very little help was obtained from the ward headmen and block elders.

A sharp lookout was kept in Myingyan throughout the year for rat mortality and rat infection and this was found in rats from the Pyaungbya quarter on the 24th December. In all, 1,168 rats were destroyed and 265 rats were examined of which five were found infected. The people were amenable to inoculation as well as evacuation and they left their houses and lived on a sand bank.

22. *Rats and Rat Fleas*.—The number of rats destroyed in the Province was 548,469 against 455,574 in 1922. Rangoon accounted for 496,987, Myaungmya (9,460), Bassein (8,527), Pyapôn (7,003), Toungoo (5,601), Syriam (5,550), Kyaiklat (3,822), Moulmein (3,291) and Kyaikto (2,465). In Upper Burma Myingyan was the only place where rats were destroyed and the number reported was 1,168.

Only the four ports of Rangoon, Bassein, Moulmein and Akyab are systematically trapping and examining rats for plague. The total numbers examined in these ports were 17,218, 8,766, 536 and 1,183,

respectively, and the percentages found infected were '66 per cent., '35 per cent., '93 per cent. and *nil*.

During the year a number of rat fleas from Rangoon and Mergui were identified with the following results :—

Rangoon 1,521 fleas, 54'77 per cent. *Xenopsylla Astia* and 45'23 per cent. *Xenopsylla Cheopis*.

Mergui 258 fleas, 96'12 per cent. *Xenopsylla Astia*, 2'71 per cent. *Xenopsylla Cheopis* and 1'16 per cent. *Ct. felis*.

Mergui is a port which has never been infected with plague and the rat flea distribution there lends support to the theory first put forward by Hirst of Colombo that the presence of *Xenopsylla Astia* and the absence of *Cheopis* accounts for the immunity to plague enjoyed by large tracts in India and Burma.

23. *Inoculation*—The quantity of plague prophylactic received from Bombay was 1,10,232 doses and there was an opening balance of 3,126 doses. The amount distributed to various districts was 1,04,408 doses, Lower Chindwin and Yamèthin Districts and Mandalay City having consumed 18,372, 12,000 and 13,002 doses respectively. Inoculations performed in these areas numbered 21,183, 12,767 and 10,604 respectively. Sagaing District obtained a supply of 8,598 doses and inoculated 8,500 persons, while Prome, Henzada and Thatôn Districts with 6,650, 3,670 and 3,780 doses did respectively 6,005, and 4,205 and 3,583 inoculations. Rangoon returned only 5,572 inoculations of which 5,313 were on the convicts of the Central Jail.

24. *Fever*.—Next to "All Other Causes" fevers account for the heaviest mortality, but the classification, based as it is upon a symptom, is unfortunately too vague and unreliable to admit of any very elaborate deduction.

Statements
VI-B and IX.

The highest rate for rural areas was returned for Tavoy (18'62) and this was followed by 13'65 for Mandalay, 13'03 for Kyauksè, 12'22 for Akyab, 11'55 for Thayetmyo, and 11'23 for Minbu. Districts returning low rates were Ma-ubin (3'56), Amherst (3'61), Meiktila (4'04), Myaungmya (4'76), Hanthawaddy (4'95) and Pegu (4'99). The heavy rise in Tavoy was due mainly to the prevalence in epidemic form of influenza and pneumonia which were apparently returned under fevers. In Tavoy Hospital 126 cases were admitted for influenza as against 1 in 1922, and 34 were admitted for pneumonia against 13 last year.

The Pegu Yomas in the Tharrawaddy District are highly malarious with a 100 per cent. spleen index and the greatest prevalence here begins with the subsidence of the rains in October. The inundated rice fields of the plains and those on the fringe of hills are however entirely free of malaria though a fair number of anopheles are met. The spleen index taken by the Civil Surgeon in many villages of those inundated tracts was *nil*. Districts where registration of vital statistics is imperfect, *e.g.*, Bhamo, Katha, Myitkyina, Upper Chindwin, Southern Shan States, etc., are reported to be highly malarious but death-rates for fevers are not available for them.

In towns, deaths from "fevers" numbered 5,164 against 5,837 in the preceding year. Of these 2,258 were due to malaria, 252 to enteric, 90 to Measles and the rest 2,564 to other fevers. It is strange that no death from Malaria has been registered at Kyaukpyu while only 37 deaths under the heading "Other Fevers" have been recorded in this malarious town where the school medical officer found as many as 178 out of 214 pupils, lately examined at the Government High School, with enlarged spleen. Other towns not registering deaths from Malaria are Sandoway, Nattalin, Pyawbwe, Nyaung-u, Magwe and Minbu. There were 106 deaths from enteric at Mandalay, 47 in Rangoon, 28 at Bassein and 17 at Moulmein. Mergui records the highest death rate (1·10) from measles and Tavoy the highest (12·63) from "Other Fevers" much of which is considered by the Civil Surgeon to be enteric. A few cases of Malignant Tertian were treated in Mergui Hospital but the worst cases of chronic malaria, chiefly among the Chinese, came from the tin mines.

The Health Officer, Mandalay, has drawn attention to the heavy death-rate caused by malaria which appears to be increasing. The rate this year was 3·91 per 1,000 and there were 583 deaths in all. The rise was broken in 1916 by a sudden fall (Death rate 1·88 with 236 deaths) and the worst year was 1919 (Death rate 5·38 with 675 deaths) since when there has been a slight fall. The Health Officer states that Mandalay is surrounded by malarious country and villages, where the splenic index is 90—100 per cent. An investigation into the causes of Malaria in the neighbourhood was begun in 1917 but no conclusive results were obtained. It is obviously impossible to eradicate malaria throughout the district, but the most hopeful line to take up is popular education in the causes of the disease and the wide distribution of cheap quinine.

25. *Malaria at Kyaukpyu.*—In connection with the malaria problem at Kyaukpyu, I inspected the town and its surroundings once in April and again in December 1923. There are two areas responsible, the upper part of the Ngalapwe Stream, chiefly affecting the Civil Station, and the Kanyindaw Swamps affecting the native town. Any scheme for the reduction or eradication of malaria in Kyaukpyu, therefore, should deal effectively with these two areas. The work that has been done in this connection since Major Lalor's report in 1912, consisted of the reclamation of lowlying marshy land, and partly of drainage and canalisation of swamp. Further, all paddy cultivation within Municipal limits has been stopped, and large areas of paddy lands within and immediately adjoining the town limits have been purchased by Government, and some of them have been let out for dry cultivation. What is now required is a continuation under skilled supervision of the drainage and levelling which have been carried on up to date, and also the provision of a dredger for reclamation of low areas. A comprehensive scheme, including dredger reclamation and drainage of more distant areas, with an estimated cost of Rs. 6½ lakhs, was drawn up by the

Executive Engineer, which if carried out is likely to make a vast difference to the health of Kyaukpyu. If the work be confined to the draining and reclamation of areas within a quarter of a mile limit from the margin of the town and the civil station, the areas of greatest danger, the estimate would probably be reduced to Rs. $2\frac{1}{2}$ or 3 lakhs.

The grazing of cattle and buffaloes, and fishing in swampy areas should be absolutely and permanently stopped before any anti-malarial scheme be proceeded with at Kyaukpyu. Further, continuity of control and supervision of the measures, is another important factor which should not be lost sight of. A deputation of about 30 townsmen waited upon the Assistant Director and requested him to represent to Government the seriousness of the malaria question at Kyaukpyu, and to request that steps for drainage and reclamation of the swamps be carried out early. The whole deputation emphatically declared that malaria had become reduced in intensity in the last few years, which they attributed to the work that had already been done.

A spleen census⁷ of children under ten has been taken on three occasions. The first was in February 1912 by Major Lalor when out of 334 children examined 231 had enlarged spleens, *i.e.*, 69·2 per cent. Then in September 1923, 593 children were examined and 483 children, *i.e.*, 81·45 per cent. had enlarged spleens. This however was during the height of the fever season. Again in February 1924, the same month as the first census, a third census was taken and out of 446 children examined 242 had enlarged spleens giving a percentage of 54·26.

Year.	No. of children.	Enlarged Spleen.	Per cent.
1912 February ...	334	231	69·2
1924 February ...	446	242	54·26

These figures tend to support the contention of the towns-people that the severity of malaria in the town has been somewhat reduced as a result of the partial measures that have been taken.

There is no doubt that malaria is still intensely prevalent in Kyaukpyu, and it is probable that it is seriously hindering the growth and development of the town. It is hoped that the anti-malarial measures which have been begun and which have already done some good, may be continued on a larger scale.

26. *Black Water Fever*.—Eight cases diagnosed as black water fever were reported during the year from Putao District. The Civil Surgeon commenting upon them states that except for Hæmoglobinuria none of the cases showed the characteristic symptoms of the disease. None showed mental symptoms and only one was at any time dangerously ill. Satisfactory results are reported to have been obtained in all cases by quinine injections in addition to salines. The Civil Surgeon is further

of opinion that the most dangerous clinical type of malaria in the district is the Algid or Asthenic where the patient is brought into hospital with a normal or more often a subnormal temperature, profuse vomiting and a choleraic form of diarrhoea. The patient is always acutely ill and it is only prompt and energetic treatment that saves him. The Putao District has a bad reputation for malaria, the most common type being Malignant Tertian.

27. *Cinchona Febrifuge Tablets*.—A long expected Resolution sanctioning the manufacture of four-grain cinchona febrifuge tablets and their sale in the form of “treatments” was published by the Local Government (Ministry of Public Health) early in May 1923 and although the revised scheme was to come into force immediately, it was not possible to begin till 1st December 1923 owing to the necessary forms and registers for the upkeep of the connected accounts not being available before that date. Consequently cinchona febrifuge in the form of five-grain and one-grain tablets were sold almost throughout the year. No quinine sulphate tablets were manufactured during the year but there was a surplus stock of 963 lbs. and 5 oz. of raw quinine sulphas and 267,770 five-grain, 50,047 four-grain and 664,690 one-grain quinine tablets on hand on the closing day of the preceding year. The stock of quinine sulphas has been taken over by the Medical Store Dépôt, Rangoon, at Rs. 27 per lb., but the tablets still remain on hand. Steps are now being taken to dispose of these locally with the approval of Government.

Both the output and issue of five-grain and one-grain tablets to Treasury Officers and others show a decrease in comparison with the figures for the previous year. Four million, one thousand nine hundred and fifty-three five-grain and 520,323 one-grain tablets were manufactured as against 4,566,971 five-grain and 1,597,034 one-grain tablets in the year 1922, or a decrease of 565,018 five-grain and 1,076,711 one-grain tablets respectively; but 2,411,079 more four-grain tablets were manufactured during the year. The quantity of cinchona febrifuge used in the manufacture was 3,778 lbs. against $3,221\frac{1}{2}$ lbs. in the previous year. Issues amounted to 4,032,178 five-grain and 608,962 one-grain tablets or a decrease of 505,380 five-grain and 899,838 one-grain tablets respectively over the figures for 1922 but 1,195,800 more four-grain tablets were issued during the year.

There has been a slight decrease, in the sales during the year, the diminution amounting to 694,390 grains less than in 1922, but being nearly two million grains higher than in 1921. Marked progress in sales was noticeable in the Northern and Southern Shan States where the increase amounted to 1,140,800 and 818,400 grains respectively. Toungoo and Salween Districts returned an increase of 362,800 and 328,800 grains. The districts which showed a large decrease were Tharrawaddy (543,600 grains), Bassein (535,200 grains), Bhamo (420,800 grains), Myaungmya, (357,600 grains) and Pyapôn (335,600 grains).

Free issues to the extent of 1,148,800 grains were made in 18 districts during the year against 436,000 grains in 16 districts in 1922. The district which received the highest dole was Kyauksè (313,600 grains) followed by Sagaing (180,000 grains), Minbu (179,200 grains), Rangoon (165,200 grains) and Amherst (160,000 grains). In the remaining districts free issues varied from 2,000 grains to 82,800 grains.

The largest consumption of cinchona febrifuge per head of population was in Putao District (9·670 grains) closely followed by Salween (9·69 grains) and Myitkyina (8·15 grains). In Sandoway, Toungoo, Katha, Upper Chindwin, Bhamo and Northern Shan States the distribution per head varied from 3·35 to 5·45 grains.

The present machine, an Allen & Hanbury's Rotary one, is worn out and is only kept going by careful handling and frequent repairs. A new Rotary tablet machine was ordered from England in October 1923 but it has not arrived yet.

Manufacturing charges, exclusive of labour and supervision, amounted to Rs. 30,976-10-6 and packing charges to Rs. 828-3-9.

The staff continued the same and consisted of one Quinine Assistant and one clerk. Mr. T. K. Sen, B.Sc., Quinine Assistant, resigned his appointment in September 1923 and a Sub-Assistant Surgeon on the same pay *plus* a house allowance of Rs. 30 succeeded him. On an average 30 to 35 convicts were engaged throughout the year in manufacturing and packing the tablets.

28. *Vitex Peduncularis*.—It was considered desirable to test the clinical value of the drug obtainable from the tree 'Vitex Peduncularis' in cases of malaria and with this object in view the Civil Surgeons of Akyab, Bassein, and Myaungmya and the Jail Superintendents at Rangoon and Mandalay were requested to test its efficacy. Reports have been somewhat conflicting but the general opinion is that the drug is of little value. On enquiry it was found that vitex peduncularis had been tried in a series of cases at the Carmichael Hospital, Calcutta, with similar results.

29. *Dysentery and Diarrhœa*.—The province as a whole and more particularly the towns and districts of the Arakan, Rangoon, Pegu and Irrawaddy Divisions have suffered less from these complaints than in the past. In the rural areas only one district, *viz.*, Mergui has recorded a mortality rate of over 1 per mille whereas in 1922 four other districts, Akyab, Kyaukpyu, Sandoway and Myaungmya, had such high rates. Kyauksè, Magwe, Meiktila, Mandalay, Shwebo and Pegu Districts have returned a low mortality this year from bowel complaints. There were 1,254 deaths from dysentery in towns as against 1,375 last year and 1,344 deaths from diarrhœa as against 1,470 in 1922. Toungoo, Thônghwa, Maulmeingyun, Minhla, Allanmyo, and Shwegyin have returned high rates for dysentery while Maulmeingyun, Wakèma, Myaungmya, Yandoon, Pyapôn, and Moulmein have had high rates for diarrhœa.

Statements
VI-A and
VI-B.

30. *Respiratory Diseases*.—Except in the case of Prome, Ma-ubin, Thatôn and Sagaing Districts, deaths from this head have decreased

considerably in Burma. The fall has been notable in rural areas, chiefly in Pegu (from 115 to 4), Akyab (from 553 to 300), Insein (from 166 to 57), Tharrawaddy (from 450 to 306), Myaungmya (from 117 to 59), Amherst (from 237 to 186). On the other hand a few districts showed a striking increase, e.g., Ma-ubin (from 150 to 262), Thatôn (from 111 to 214), Sagaing (from 237 to 369). The towns have also on the whole recorded a reduction in mortality under this head, the principal exceptions being Prome, Syriam, Allānmyo, Myaungmya, Moulmeingyun, Danubyu, Kyaiklat, Mergui, Yamèthin, Taungdwingyi, Minbu and Salin.

Pneumonia accounted for 2,771 deaths in towns, Phthisis for 1,609, and other Respiratory Diseases for 3,549 deaths, the largest number under each of these heads having occurred at Rangoon and Mandalay.

Statement
VI-B (a).

31. *Tuberculosis of the Lungs* is stated to be on the increase in towns. The Civil Surgeon, Myaungmya, is of opinion that no other disease is more prevalent in Myaungmya Town than tuberculosis although only 17 deaths were recorded during the year. Moulmeingyun had 15 deaths, mostly among poor people living in dark and ill-ventilated houses in the northern part of the town. The place was low-lying, and marshy but has been reclaimed during the year. Maymyo recorded 17 deaths from phthisis against 10 last year, and they were chiefly among Mahomedan and Hindu Purdah women. There were besides, 5 deaths due to tuberculous affections other than phthisis. In the Myitkyina Hospital 44 cases were treated of whom 12 died. The Civil Surgeon, Pakôkku, remarks that tuberculosis of the lung seems to be more prevalent than was believed, and urges the municipality to pay greater attention to preventing insanitary buildings springing up, a point which requires greater attention all over Burma. The Civil Surgeon, Myingyan, says that pulmonary tuberculosis in the adult is very prevalent, due to unhealthy conditions in and around houses, and the dirty and ill-kept state of the town. He suggests that cases of intestinal tuberculosis have been mistaken for dysentery and returned as such. Rangoon had 939 deaths from tuberculosis of which 887 were recorded as phthisis; and Mandalay had 263 deaths, almost the same as last year, but much more than in any of the three years previous to that. Bassein returned 129 deaths, (one less than in 1922) mainly among Hindus and Mahomedans, though 44 deaths among Burmese and 15 among Chinese are also on record. The Health Officer, Moulmein, writes that deaths from tubercle of lungs are often attributed to "Hnget Pya" jungle fever, by the informants.

Statement
VI-B (a).

32. *Beri-Beri*.—During the past year this disease has been the subject of special investigation, details of cases having been reported by Civil Surgeons upon a *pro forma* issued for the purpose. Unfortunately the care and thoroughness with which the reports were made were not uniform, and in several instances the reporting officers submitted five or six reports at a time, each report being entered with identical signs and symptoms,—a rather unlikely coincidence. It is proposed to repeat the

investigation for another year, and it is hoped that reporting officers will on this occasion realise their responsibilities, and interest themselves in submitting detailed and complete reports from which reliable deductions can be drawn. From reports received however certain facts have been revealed which will be of assistance in later investigation.

Deaths.—In the towns of Burma during the last four years, the average reported annual deaths have been 221, while during the past calendar year 199 cases died of the disease. Of these 199 deaths 116 (99 males and 17 females) were reported from Rangoon alone, and out of them 92 were Hindus. Mergui, Bassein, Mandalay, Maymyo, Tavoy and Akyab Towns returned 22, 10, 10, 8, 7, and 6 deaths respectively.

Cases.—Owing to the fact that detailed reports for 111 cases admitted to the General Hospital, Rangoon, were not available,—only 184 cases could be included in the above-mentioned investigation. Dealing first with the Rangoon Hospital cases, about 75 per cent. were reported as coolies by occupation, and only 25 per cent. of the cases were women. Women for various reasons do not seek hospital treatment so readily as men. Turning to the 184 cases for each of which a detailed statement was received, 61 occurred among non-Burman races, and most of these showed lengthy periods of residence in the country previous to contracting the disease. It is worthy of note, however, that of 36 cases classed as “Indians” 14 had resided in this province for less than one year, but as 11 of these were coolies, who usually come here for a short period, this point may be significant of the fact that diet rather than period of residence in the country had more to do with their falling sick.

Amongst the indigenous races of Burma 123 cases occurred and no particular occupation or trade appeared to predispose towards the disease. An interesting series of cases was that reported by the Civil Surgeon, Mawlaik, and consists of 38 Chins of the Military Police, Kalewa,—all of whom had been in the station for less than a year, and had been living on a varied diet. The Civil Surgeon expresses the opinion that Chins are particularly susceptible to the disease, and in this connection it may be recalled that in 1918 when the 2/70th Burma Rifles were transferred to Secunderabad, the Chin Bok Company suffered from an outbreak of beri-beri although there had been no quantitative or apparent qualitative change in their rations. It is noticeable that all the 184 cases were rice-eaters, that 168 used milled rice,—that many were accustomed to a well-varied diet with no apparent protein or vitamine deficiency,—and that there had been no change in diet before the onset of disease. The outstanding feature therefore is that the disease occurred principally amongst the eaters of milled rice. Samples of rice used by 47 of the patients were analysed and the Phosphorus Pentoxide content was found varying between '23 and '41 per cent. whereas '45 per cent. has been regarded as the danger-limit below which beri-beri cases are liable to occur. This may indicate that the process of milling had removed sufficient of the cortical layers to reduce the vitamine

content below the safety point or alternatively that the removal of these cortical layers facilitated the entry and growth of toxin-producing organisms in the rice grains. Of the rice samples analysed, the one giving the highest $P_2 O_5$ figure of '41 per cent. was curiously enough associated with the only case in which no oedema was reported,—all other cases having shown this sign.

Seasonal Incidence.—In 1918, Major (now Lieutenant-Colonel) T. F. Owens, I.M.S., in a report on beri-beri in Rangoon drew attention to the fact that the disease only occurs after the rice has been in storage during the hot wet months of May—July. New rice in Rangoon reaches the market in January—March, and coincident with its arrival beri-beri in its acute form ceases to occur. In Lower Burma last year there was a rise in the number of cases from July, the crest being reached in September. In Upper Burma a similar rise is noted from June to September with a rapid fall in October.

In Burma therefore the disease appears to be definitely seasonal, July to November or December being the months of greatest incidence. The fact favours the theory put forward by Megaw and Acton in connection with Epidemic Dropsy that the disease is an intoxication due to infection of the stored milled rice with a toxin-producing micro-organism. This theory appears to me to fit in best with the observed facts of beri-beri in Burma and although much further investigation is required I consider we have sufficient grounds for regarding the age and storage conditions of milled rice as important factors in the etiology of the disease and therefore as points requiring control with a view to its prevention. Finally it should be noted, that of the 184 cases investigated, 38 were military sepoyes at Kalewa, 20 were military police at Maymyo, 6 were Civil Police at Myingyan, and 15 were prisoners in lock-up, *i.e.* 79 were in receipt of rations and were therefore restricted to a greater or less extent in their choice of food.

33. *Hookworm Infection.*—Examinations by the Prison Department Staff for hookworm infection were made on 33,025 prisoners in 30 jails during the year as against 9,106 in 12 jails last year. Of these 10,957 or 33·18 per cent. were found to be infected. Heaviest infection, as expressed in percentages of those examined, was disclosed at Insein (87), Rangoon (74), Mergui (72), Thayetmyo (58), and Akyab (57). Between 25 and 50 per cent. were found infected at Tavoy (49), Prome (47), Ma-ubin (46), Myaungmya (44), Yamèthin (39), Paungdè (36), Myingyan (32) and Kyaukpau (26), while still lower rates were recorded for Henzada (21), Toungoo (19), Mandalay (19), Meiktila (17), Myanaung (15), Bassein (14), Shwebo (11), Moulmein (6), Magwe (8), Shwegyin (3), Bhamo and Mônywa (2 each) and Pagan (1). No infection was traced among the prisoners examined at Sandoway, Katha, Mogôk, and Taungdwingyi Jails although I have little doubt it was present. These results cannot be regarded as accurate owing to variations in technique and in thoroughness. In order to estimate the worm index more accurately among such

of the prisoners as might be considered representative of the general public I suggested to the Inspector-General of Prisons, that a special investigation based upon Darling's method of test doses of Chenopodium oil in certain selected jails might be of value, and the latter kindly arranged for Sub-Assistant Surgeon T. S. S. Iyer to be placed at my disposal for the purpose.

Mr. Iyer began work in the Rangoon Jail on the 28th September 1923, and visited the following nine jails in turn :—

Akyab,	Mandalay,	Prome,
Moulmein,	Myingyan,	Henzada, and
Toungoo,	Thayetmyo,	Bassein.

He was required to select for examination in consultation with the Jail Superintendents, all prisoners, fulfilling the following conditions :—

- (a) Residence in jail including previous convictions not exceeding 3 months.
- (b) No previous anthelmintic treatment for hookworm.
- (c) All genuine residents of a rural district or town in Burma ; genuine residence to be taken as unbroken residence for a period of five years previous to coming to jail.
- (d) No age limit to be fixed ; but the very old and children to be excluded, as also any debilitated individual who might be unable to stand the treatment.

The test treatment given was as follows :—

A preliminary saline purge, 30 gram. of magnesium sulphate with 300 c.c. of water, given at 8 p.m. the evening before treatment. The following morning 2 c.c. of Chenopodium oil given at 2 a.m. on a fasting stomach, followed by a final saline purge at 9 a.m. with a full glass of water. When the patient's bowels acted well he was allowed breakfast.

The figures obtained show the following points of interest :—

Out of 682 prisoners treated 67·16 per cent. were positive. The following figures give the percentage of persons infected and the average worm count or worm index in each jail :—

No.	Names of jails.	Percentage of persons infected.	Worm index.
1	Rangoon ...	73·30	13·34
2	Akyab ...	74·29	7·65
3	Moulmein ...	79·55	22·34
4	Toungoo ...	75·58	7·56
5	Mandalay ...	19·51	0·41
6	Myingyan ...	39·34	2·03
7	Thayetmyo ...	66·66	10·06
8	Prome ...	70·59	12·41
9	Henzada ...	81·82	21·71
10	Bassein ...	64·58	8·48
	Total ...	67·16	11·18

Cultivators and coolies were chiefly affected. The total number of worms counted was 7,629 or 11·18 per head, and of these 7,012 or 91·912

per cent. were of the variety *Necator Americanus*, 430 or 5·636 per cent. were of the variety *Ankylostoma Duodenale*, while 187 or 2·451 per cent. were *Ankylostoma Ceylonicum*.

34. *Mak-Aw-Lam*.—Mention of this strange disease was first made in the Triennial Report on Hospitals and Dispensaries, Burma, for the year 1917-19. The Civil Surgeon, Taunggyi, in a letter to the Director, Pasteur Institute, Burma, dated the 5th July 1921 reported that the complaint was prevalent in the Lake District of Yawngkhwe and one or two other places. There are said to be three varieties, all characterised by painful papules round the anus or just within the rectum. The Shan Word “Makawlam” means :—*Mak* (Fruit), *Aw* (get) and *Lam* (black), evidently in reference to the dark papular eruption. The symptoms are said to be pain in the joints and pyrexia, lasting from 6 to 10 days sometimes complicated by lobar pneumonia and symptoms of enteric fever. The first variety is said to be the most fatal and in this the papules are black, the second or red variety is said to be more amenable to treatment and only about 25 per cent. die ; while the third characterised by white papules, is not considered fatal.

The Shan *Sayas* treat these cases by pricking the papules and letting the dark blood escape. Samples of blood were sent for examination to Colonel Gloster, I.M.S., with an account of the clinical facts, and the blood on examination gave negative results for the Typhoid group but contained many Malignant Tertian Malarial parasites. Since then the Medical Officer in-charge of Yawngkhwe Civil Hospital has been instructed to urge Quinine treatment by intravenous injections. The results are reported to have been gratifying. Some believe that the disease is spreading and the Civil Surgeon considers this is due to free communication and the opening up of trade routes. The early part of the rains is said to be the period of greatest prevalence.

Information has reached this office of its reputed prevalence in parts of Kyauksè and Meiktila Districts and the local *Sayas* are reported to be enjoying a lucrative practice, posing as experts in the treatment of this disease. The Civil Surgeons of these two districts report that cases of malaria, plague and small-pox are wrongly classified by these *sayas* as “Makawlam” and treated accordingly. The Civil Surgeon, Kyauksè holds that in view of its close association with a disease prevalent among cattle, the condition is “Anthrax.” This possibility is further strengthened both by the three papular stages and by the pneumonic or septicæmic symptoms described. The malarial conditions reported may possibly be concomitant. He further suspects that in some cases the origin of the disease is to be found in the Shan custom of eating cattle that have died from anthrax, and suggests that the habit common both to Shans and Burmans of using sticks instead of water after defæcation may be responsible for the fact that in 90 per cent. of cases the anus is the site of infection. I am of opinion that this is not a new disease, but that the name is conveniently used by local *sayas* for a number of cases

which do not come under the treatment of a properly qualified medical man. It is hoped to investigate the condition further in the near future.

35. *Veldt Sores*.—In a group of ten villages of the Tavoy District over 100 persons were affected with this disease. The epidemic manifested itself as foul smelling ulcers, generally located on the anterior aspect of the lower extremities. The individual ulcer is more or less round and is generally about the size of a rupee with inverted edges, indurated base, and covered by a thin layer of purulent discharge. The people affected were chiefly the cultivator class, males being more frequently affected than females.

Smears were sent to the Director of the Pasteur Institute, who reported that the sores contained true Diphtheria Bacilli.

Various suggestions were made as to the mode of infection. According to some, the sores are caused by an insect bite, while others think they were due to injuries received in the process of "Taungya clearing," a work which consists in clearing virgin jungle for hill cultivation of rice, and is carried out chiefly by men. It is also possible that flies played a part in the spread of infection. The "returned soldier" explanation of the origin of the infection is suggested by the Civil Surgeon although he has been unable to corroborate it.

On the suggestion of Major Taylor, I.M.S., the sores were treated with a preliminary bath of Potassium Permanganate solution followed by a dressing of Vincent's powder. Dr. Rodrigues, Civil Surgeon, Tavoy, reports that the treatment was highly successful in all cases.

Although true Diphtheria bacilli were present in the sores no Throat Diphtheria nor paralysis occurred in any case. Sub-Assistant Surgeon Maung Tin, whom I placed on special duty in connection with the outbreak, found that the sores cleared up under any simple form of antiseptic dressing.

36. *Goitre*.—This disease is stated to be endemic in the districts of Bhamo, Chin Hills, Pakôkku and Upper Chindwin, and also among the hill tribes in Southern Shan States. For the year 1923 there have been 329 entries in the out-patient hospital register of Bhamo for this disease. Simple Goitre is a disease in which prevention is not only better than cure but very much easier. This is not yet appreciated by the Kachins of Bhamo. Those who attend hospital there for treatment are mainly women, this sex being particularly liable, but they do not come for treatment until the condition is too well established for treatment to do much good. The disease is reported to be highly prevalent in the Chin Hills, so much so that the Deputy Commissioner states it to be the chief cause of unfitness for military service among Chins. I have recently circularised all Civil Surgeons on this important question advising the method of prevention of Goitre by the administration of iodine in childhood, and it is satisfactory to note that the Civil Surgeon, Bhamo, proposes with the aid of the Deputy Commissioner to conduct a campaign against the disease on the lines indicated during the ensuing

year. For the success of this it is necessary that wide publicity be given to the method of prevention and the successful results that have been achieved in other places.

SECTION IX.

Civil Sanitary Works.

37. *Expenditure on Civil Sanitary Works.*—A sum of Rs. 59,07,864 was spent on Civil Sanitary Works. Of this Rs. 55,55,894 were expended on behalf of towns, and Rs. 3,51,970 on that of rural areas of districts, these sums representing 30·12 and 2·40 per cent. respectively. Of the aggregate income of Municipalities and Districts, conservancy absorbed 7·58 per cent. of the total, water-supply 6·62 per cent. and drainage 1·23 per cent.

38. *Health Board.*—The Report of the Superintending Engineer, Department of Public Health, is published as Appendix A and that of the Provincial Public Health Board, as Appendix B. No further comment is called for.

39. *Water-supply.*—A 6-inch tube well was sunk at Nyaunglebin Town, yielding about 4,000 gallons of water at a depth of 315 feet ; the water has been analysed and found to be satisfactory. In Syriam Town the artesian well drilled by the municipality in 1916 continues to yield a good supply of water and during the year 6,500 running feet of water mains were laid. In August 1923 a piped water-supply was introduced into Pegu Town. This is said to meet a long felt want and should improve the health of the town. The municipality is reported to be framing bye-laws to regulate the supply.

Yandoon Town is still dependent upon shallow wells and the river for its supply. A tube was sunk in 1921 but the water has unfortunately proved non-potable.

Other water-supplies are dealt with in Appendix A.

40. *Conservancy.*—A dumping septic tank has been constructed at Syriam during the year at a cost of Rs. 7,000 but the arrangements for disposal of effluent are not yet complete. The Municipal Committee at Wakèma acquired 5 acres of paddy land for use as a trenching ground and had it reclaimed by dredger.

At Maymyo the septic tank installation in Government House which previously gave some trouble is reported to be now working satisfactorily. Two small septic tank latrines constructed this year near the market are also proving a success.

41. *Anti-Malarial Operations.*—A Malaria Survey was undertaken in the district of Katha, between the 28th May and the 15th October, by Assistant Surgeon Feegrade of this Department. A preliminary investigation at Kawlin showed that the disease is endemic at this place only to a small extent. On the other hand, the survey of Katha Town established the fact that while the town proper is relatively free from

malaria, the inclusion in the town area of the adjoining villages of Sepanzu and Lebyu has raised the figure of the endemic spleen rate from 14 to 25 per cent. In 1913 Major Lalor discovered a spleen rate of only 15·3 in Katha, and the evil reputation of the town itself for malaria is evidently somewhat exaggerated. Other towns for which spleen rates were estimated and recorded are :—

Kyaukpyu	...	...	81·45 (in September).
Kyauksè	...	...	36
Labutta (Myaungmya)	...	...	57
Wuntho	...	...	74

At Kyundaw Village, west of Katha Town, a spleen rate of 80 per cent. in June and 44 per cent. in September was recorded and it is obvious that the area to the west of the railway line is the portion that is badly infected. There are many acres of irrigated paddy land and swamp here. The place was visited by Colonel Bisset in August while the survey operations were going on, and he has noted that the first thing to do is to restrict paddy cultivation in the immediate vicinity. Other measures recommended include filling in of irrigation channels, improvement of existing drainage of the area liable to inundation, oiling of the edges of pools and kacha drains, intelligent utilization of town rubbish for filling in hollows and depressions. Recommendations have been made to the local bodies concerned. At the Military Police outposts in the Upper Chindwin District malaria was reported on the increase, and the issue of prophylactic quinine and clearing of jungle were carried out.

42. *Port Health Département, Rangoon.*—The following summary shows the inspection and disinfection work done in the port of Rangoon in connection with outgoing and incoming vessels during the year ending 31st December 1923.

One thousand three hundred and ninety-five incoming vessels of all classes with 4,69,410 crew and passengers were examined during the year. Vessels proceeding out of India numbered 463, and in these 40,447 members of the crew and 19,968 passengers of all classes were examined. Among the incoming vessels 34 cases of infectious disease were reported by Commanders of 28 vessels. Eleven deaths from non-infectious disease were also reported on 10 vessels. There were 448 vessels inspected under the Vaccination Act of 1909, and on 41 of these 53 cases of infectious disease were detected. The disinfection of the belongings of 614 members of the crew and of 2,693 passengers of infected vessels was carried out. In the outgoing vessels 28,499 Asiatic and African members of crews and 13,879 deck passengers had their effects disinfected ; 3,219 luggage coolies were inspected and their body clothes and uniforms disinfected prior to handling passengers' luggage. Fourteen vessels were fumigated while empty, and 496 rats were destroyed.

The Port Commissioners' Dispensary, which was opened in 1921 shows a daily average attendance of old and new cases of 66.51 making a total of 20,951. The sanitation of the Port Area was undertaken by the Port Health Officer, Dr. Crow, who is steadily improving it.

SECTION X.

Personal Proceedings and General Remarks.

43. *Director of Public Health.*—Lieutenant-Colonel Bisset held charge of the Department throughout the year and was confirmed in the appointment with effect from 29th July *vice* Lieutenant-Colonel Williams (retired). He visited the following places :—

Maymyo, to attend Public Health Board Meeting ; Meiktila, to inspect the Vaccine Depôt, and also to report on the suitability of military buildings for a consumptive sanatorium ; Prome, Shwebo, Sagaing and Moulmein, to inspect the sanitary condition of the towns ; Katha to supervise malaria investigation work ; Bassein, Ngathaingyaung, Kyônpyaw and Yegyi, to inspect and advise on relief measures for the flooded areas ; Kyaikto to inspect the site of the Annual Pagoda Festival. He also visited the Federated Malay States in September to attend, as delegate for Burma, the Fifth Congress of the Far Eastern Association of Tropical Medicine at Singapore, and paid a special visit to Mandalay in December to supervise the arrangements for the Viceregal Visit.

44. *Assistant Director.*—I held this appointment throughout the year and inspected the following places :—

Kyauksè, Akyab, Paletwa, Kyaukpyu, Sandoway, Danubyu, Insein and Bassein.

In October I visited the Hygiene Section of the Calcutta School of Tropical Medicine and obtained full particulars as to cost of equipment, staff, etc. I was also in charge of the Government Training School for Public Health Inspectors instituted this year.

Captain Bilderbeck joined the Department as Second Assistant Director in July, and by the end of the year he had inspected the following places :—

Meiktila Town and District, Ma-ubin, Pyapôn, Kyaiklat, Toungoo, Thandaung and Pyinmana.

He also accompanied Colonel Bisset to the flooded areas of Bassein District and subsequently visited Ngathaingyaung.

45. *Medical Subordinates.*—Military Assistant Surgeon E. S. Feegrade was employed on plague duty in the Lower Chindwin District in February and March, on small-pox duty in the Magwe District in April and May, and on malaria duty in Katha District from June to October. He was deputed in November for a six months' training at the Calcutta School of Tropical Medicine. Sub-Assistant Surgeon Maung Shwe Tha

was on sanitary duty in Mandalay District during the whole year, and Sub-Assistant Surgeon Maung Mai was employed on health propaganda work in Meiktila District for three months from February and on general sanitary duty in Amherst District for the remaining months, Sub-Assistant Surgeon Maung Than did particularly useful work in Prome District in educating the people in public health matters by lectures, and also in suppressing epidemic outbreaks. He was employed here from January to May and again from July to the end of the year.

Mr. T. S. S. Iyer was detailed by the Inspector-General of Prisons for hookworm investigation work in certain jails of the province, and was employed in that capacity for six months from 28th September 1923.

Other districts in which medical subordinates were employed on epidemic duty for varying periods were Magwe, Minbu, Akyab, Yamèthin, Sagaing, Katha, Myingyan, Tavoy, Meiktila, Upper Chindwin, Bhamo, Pakôkku, Myitkyina, Kyauksè, Northern Shan States, and Chin Hills.

46. *Rangoon Sewage Disposal Committee*.—Three meetings of this Committee were held during the year. Particulars obtained from other provinces were considered and an estimate amounting to Rs. 95,000 for conducting float experiments was submitted to Government, and is still under consideration.

47. *Rangoon Water-supply Committee*.—In a Resolution of the 8th June 1923, the Local Government appointed a committee of 14 members, including the Director of Public Health under the Chairmanship of the Development Commissioner, Burma, to enquire into and report on the whole question of the future water-supply of Rangoon. The first meeting was held on the 3rd August 1923, but Colonel Bisset was unable to attend as he was engaged with the Retrenchment Committee at the time of the meeting.

48. *Sanitary Condition of Mines*.—The report on Namtu Mines was received very late and it is published along with a summary of the condition of mines in Tavoy and Mergui Districts as Appendix C.

49. *Sanitary Inspection of Schools*.—Thirty-nine reports relating to the inspection of 25 schools in Lower Burma and 14 schools in Upper Burma were received. Many sections of the Form of Report now in use involve much clerical labour, and contain little information of value in estimating the health of school children; so a new form is being prepared, and it is hoped by its use to obtain more accurate and comparative information in regard to the progress or otherwise of the health of school children. A simplified medical history card was issued in November 1923. The children examined numbered 7,395 as against 2,184 in 1922. Only 158 children were found unprotected against small-pox.

From the reports it is noteworthy that the care of teeth appears to be neglected especially in Lower Burma; and that the percentage of children with defective eyes is greater in Upper than in Lower Burma,

probably due to greater glare and dust. Enlarged tonsils are commoner than they should be. On the whole the standard of health of school children as reported has been fairly satisfactory and the standard of school vaccination is steadily improving. The sanitary condition of school buildings and the arrangements for water supply and conservancy were generally reported to be good.

The system of medical inspection of school children must develop a good deal further before much reliance can be placed upon statistics collected.

50. *Sanitation of Police Lock-ups.*—In accordance with orders recently issued by Government, monthly reports on the health conditions of police lock-ups were submitted to my office from September 1923 by the Sub-Assistant Surgeons in charge, and 18 lock-ups were reported upon during the year.

Bassein and Ingabu Lock-ups were reported to be overcrowded. In Letpadan, Thônze, and Tharrawaddy Lock-ups no provision was made for a change of clothes, nor facilities afforded for washing. The diet supplied at Kanbalu Lock-up was stated to be poor in quality.

Thirteen prisoners from various lock-ups who were sent up to Rangoon (7), Insein (3) and Pagan (3) jails are reported to have developed "Beriberi." These are stated to have been detained for long periods varying from 45 to 110 days with insufficient clothing and poor diet. The cases improved after arrival in jail. There is reason to believe that these reports on lock-ups will prove of great value in drawing attention to faults and preparing the way for their correction.

51. *Mineral Springs.*—Acting on a suggestion made in the local Press, it was decided to inspect certain mineral springs in the province during the year. Captain Bilderbeck, I.M.S., visited the sulphur springs between Thandaung and Pathichaung in October 1923. This spring was reported upon in 1904 by Mr. W. A. Moran, Executive Engineer, Public Works Department, who stated that its water was believed locally to be curative for indigestion and fevers, that the temperature was about 100° to 120° F. and the output 24 gallons per hour. A suggestion was then made for a bath to be erected, but that did not receive the support of the then Inspector-General of Civil Hospitals who considered that it would not be used. Captain Beit, I.M.S., then Civil Surgeon of Toungoo, pointed out that the water though containing only 22 parts of dissolved solids per 100,000 was in a way similar to that at Aix-la-Chapelle, and as Sodium Chloride was absent he thought it would be suitable for gout, Bright's disease and vascular diseases generally, cirrhosis of the liver, rheumatism and certain cutaneous diseases.

The Civil Surgeon, Toungoo, and the Deputy Sanitary Commissioner who visited the springs in 1905 suggested that the site was suitable for the erection of baths, that the water was suitable for the treatment of fevers and certain skin eruptions and estimated the dissolved

solids at 26 parts per 100,000. After inspecting the pool and its surroundings Captain Bilderbeck was of opinion that owing to the locality being low, malarious, and difficult of access, the springs are not likely to prove of any great value.

The Civil Surgeon, Shwebo, was requested to visit the hot water springs at Halingyi, and he reported that there are now five springs, two of which are only 3 yards apart, one being used by males and the other by *phongyi*s exclusively. The third which is at a distance of about 50 yards from the *phongyi* well is called the "egg well" as the heat of the water therein is supposed to be sufficient to boil an egg. This is not used as the water is too hot for bathing. The fourth well is about 20 feet distant from the "egg well" and is reserved for the use of females. Another well 15 feet away from the fourth is a cold water spring also used for bathing and washing purposes. The villagers of Halingyi look after these springs and do the necessary repairs protecting and cleaning them whenever necessary. The water is locally considered a cure for skin diseases. The Civil Surgeon in conclusion suggests that these springs might be improved by having them better protected, but thinks that there would be difficulty in providing housing arrangements and that few people who could afford to pay would go there for a cure.

These reports were published for the information of the public in the beginning of January 1924 and as a result the existence of a number of other hot water springs in the Pa-an Subdivision of the Thatôn District, at Yaboo in the Amherst District, and at Maungmagang in Tavoy District was brought to light.

Some of these will be visited and reported on as opportunities arise. The development of these hot and mineral springs is a matter for District Councils to take up.

52. *Public Health Inspectors' Training Class.*—A training school for Public Health Inspectors was opened during the year under Major Jolly, I.M.S., the Senior Assistant Director. The course of training lasted for ten months and included instruction in Elementary Chemistry, Physics, Anatomy and Physiology, a six months' systematic course in Hygiene and Sanitation, a three months' course in Surveying, Levelling and Minor Sanitary Engineering and special courses in the Routine Duties of a Public Health Inspector, Meat Inspection and Veterinary Hygiene, Rubbish Disposal and Vaccination. The course was open to candidates nominated by local bodies and to approved private students if vacancies exist. Experience has shown that not more than twenty-five students can be properly trained at a time, and that educational qualifications not lower than High School Final Certificate are necessary if the students are to follow the course intelligently. It is hoped that Local Bodies will take advantage of the excellent facilities offered in future courses and nominate their own educationally qualified candidates.

Twenty-seven students were admitted to the class. Casualties due to death, withdrawal, and expulsion numbered 6, reducing the number

to 21 by the end of the year. Of these 11 were Burmans, 3 Anglo-Indians, and 7 Indians.

The qualifying examination of this class was held in April 1924 and 13 students passed.

53. *Hygiene Institute*.—Proposals made to Government in 1922 for the establishment of a Provincial Hygiene Institute have now taken definite shape, and a sum of one and a half lakhs has been placed in the 1924-25 Budget for this purpose. A site has been earmarked in Theatre Road, Rangoon, and it is hoped to commence building this year. The functions of the Institute will be Teaching, Routine Public Health Laboratory work and Research.

54. *Health Codes and Rules*.—A pamphlet of advice for the guidance of District Councils in framing bye-laws for rural areas has been prepared by the Department and is now in the Press.

A set of rules for the guidance of Sub-Assistant Surgeons in Medical charge of Lock-ups in Burma, was framed and issued by the Local Government in August this year and the rules, it is hoped, will do a certain amount to improve the hitherto neglected condition of lock-ups and their inmates.

Mr. Charlton, Agricultural Chemist, Burma, after a series of experiments has devised a process for parboiling paddy which effectually prevents the nuisance caused in the parboiling of rice. The Local Government has now issued a set of model bye-laws for the guidance of District Councils in regulating this process.

55. *Health Education*.—There has been a further demand for the various health pamphlets which were issued last year in connection with Infant Welfare, viz., (1) Babies' language ; (2) Baby's food ; (3) Baby's development ; (4) Why do babies cry ? A reprint of these was arranged and circulated. A special feature of the year has been the organising of Health and Baby Weeks in various centres throughout the Province including Rangoon, Mandalay, Moulmein, Bassein and Akyab. These are educative in their object, and undoubtedly do a great deal of good in spreading health knowledge. It is hoped that they may become an annual event and that many more centres will participate in the movement next year. Details of these weeks do not properly belong to the year under consideration.

The demand for distribution of departmentally issued pamphlets and leaflets on health topics has continued and several more have been issued during the year, including one on " Venereal disease," one on Plague, entitled " The wicked Nat " and two which have been borrowed from the League of Red Cross Societies Bulletin and translated into Burmese, called " The Village Well " and " The Careless Boatman." The Department has also published many informative extracts and original articles on health subjects in the Press.

The recently formed popular Health Education Sub-Committee of the Burma Branch of the Indian Red Cross Society has been active

during the year and has done valuable work in the spread of Health Knowledge by means of lectures, cinema slides and publication in the Press. It is sincerely to be hoped that this voluntary organization's activities will be sustained and assist in developing the sanitary conscience of the people at large.

56. *Medical Officers of Health*.—Proposals for the employment of ten Burman Sub-Assistant Surgeons from the Medical Department on whole-time public health duty in Burma for a definite term have been submitted and are now under consideration by Government. These candidates will be put through a special course of training in Sanitation and detailed for public health duty under this department. It is also expected that five Civil Assistant Surgeons will shortly be transferred from the Medical Department, and the intention is to employ them as Assistant District Health Officers in those districts which are in most urgent need of assistance. There is a growing desire on the part of Municipal and Town-Committees to appoint their own qualified Assistant Health Officers, and a proposal has been submitted to Government for the appointment of specially selected Medical men of the Assistant or Sub-Assistant Surgeon's class in small towns as Assistant Health Officers.

57. *Ghee Samples*.—Under the Ghee Adulteration Act, 67 suspected samples were taken in Rangoon Town and sent for examination to the Chemical Examiner, who declared 16 cases as "adulterated."

Legal action was taken in ten instances. Of the prosecutions six were successful, the fines amounting to Rs. 51 and costs to Rs. 6. In one case the party concerned left the town and the case was dropped, while three other cases were still pending at the close of the year. Action was also taken in one case for refusal to sell a ghee sample.

RANGOON, 29th May 1924.

G. JOLLY, Major, I.M.S.,
Offg. Director of Public Health, Burma

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APPENDIX A.

Annual Progress Report on Work carried out by the Superintending Engineer, Department of Public Health, Burma, for the year 1923.

WATER SUPPLY.

Yenangyaung.—This was the largest scheme prepared and included distribution pipes, pumping plant, etc. No further action has been taken by the Municipality on the general scheme. Tube wells only were sunk in 1918 from which the town will be supplied.

Thônzè.—An estimate for Thônzè Town for new distribution mains and pumping plant was prepared by the Municipality, this was examined and approved ; part of the work has been carried out.

Daiku and Kyaikto.—Estimate to ascertain if water from tube wells for the towns of Daiku and Kyaikto were prepared and forwarded to the bodies concerned. Allotment of funds is awaited.

Bassein.—Owing to the rise in prices of patent strainer tubes and tubing, the estimate for the tube well at Bassein had to be revised. The revised estimate was forwarded and reappropriation of funds is awaited. The Ashford Patent Strainer tubes have been purchased and are in stores.

Dalla.—Estimate for an experimental tube well to be sunk at Payagyi was sanctioned and work carried out, proving that water was available. This was sunk with the primary object of ascertaining if good water would be available and in sufficient quantities to form the basis of a scheme of water supply to Dalla and Kanoungto. This matter is under consideration.

Kyauktan.—Estimate for sinking an experimental tube well at Kyauktan for the town's supply was sanctioned and work carried out. Potable water was struck, but the yield was disappointing. Further investigation will have to be undertaken.

Amherst.—An estimate for an experimental tube well at Amherst was sanctioned and work put in hand.

Unfortunately, rock was encountered during the sinking. The plants at our disposal are not suitable for drilling in rock. It was decided to select another site, but owing to the estimated amount having been expended and no further funds being made available, the work was closed down.

Magwe.—An estimate for an experimental tube well at Magwe for preliminary investigation for the town's supply was sanctioned and the work carried out.

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The tube well was successful in proving that a good and ample supply of water was available.

Further orders for the complete scheme to be got out are awaited from the Municipal Committee.

Pyinmana Forest School.—Estimate for increased water supply to Pyinmana Forest School and distribution mains was prepared and funded, and the constructional work is being undertaken by the Executive Engineer. In this case, water is being obtained from an infiltration gallery.

Tharrawaddy Jail.—An estimate was prepared and forwarded for sinking a tube well for this supply. The estimate has been sanctioned and work will be commenced as soon as a boring plant is available.

Home for Incurables, Rangoon.—Estimate was prepared and forwarded for sanction for a water supply to the proposed extension to the Home for Incurables (Leper Asylum), Rangoon.

Water will be obtained from the existing tube well in the Leper Asylum. The estimate provides for new pumping plant, distribution mains, internal fittings and elevated tank.

Several small schemes submitted by Local Bodies have been criticised and returned with modifications and suggestions ; in many cases the towns have been visited.

SURFACE WATER DRAINAGE.

A certain amount of preliminary work and in some cases complete estimates have been made for Surface Water Drainage to the following towns : Pyapôn, Pyu, Pegu, Kanyutkwin, Kyaiklat, Bassein, Mergui, Myanaung, Labutta, Kyauktan, Insein, Akyab. Surface water schemes are very difficult to work out, in many cases owing to the town being low lying and an outfall not being possible unless pumping is resorted to, which, of course, makes the scheme impossible, owing to cost. In other cases, nothing but a complete new layout can be undertaken to obtain a satisfactory scheme.

In cases where reclamation has to be undertaken, it must be borne in mind that reclamation levels should be such as to ensure that satisfactory gradients and outfall can be obtained for surface water. I am of the opinion that very little progress will be made in the surface drainage of towns, until such times as a Burma Town Planning Act is in force.

BAZAARS.

Estimates and plans were examined and alterations and suggestions made to some ten schemes for bazaars in the province amounting to some Rs. 3,20,000, namely :—

- | | |
|-------------|---------------|
| 1. Bassein. | 6. Mônywa. |
| 2. Sitkwin, | 7. Yeni. |
| 3. Thonzè. | 8. Kambe. |
| 4. Thegôn. | 9. Thayetmyo. |
| 5. Hlègu. | 10. Taungtha. |

INSPECTIONS.

Inspections of towns and villages in the province, either in connection with water supply, sewerage and sewage disposal, markets drainage layouts, etc., were carried out during the year. In many cases the inspections have been of great value, both to the local bodies concerned and this department.

Information and advice has been sought and freely given to the local bodies on engineering matters affecting public health.

A. F. HINGSTON,
Superintending Engineer, Dept. of Public Health, Burma.

APPENDIX B.

**Annual Report of the Provincial Public Health Board
for 1923.**

The Provincial Public Health Board was constituted in 1922 by a Resolution of Government in General Department Circular No. 27 of 1922. It was pointed out that the administration of sanitary affairs in Burma had hitherto suffered by the absence of any co-ordinating authority to assist the Local Government in arriving at correct estimates of the importance of sanitary projects proposed in different parts of the Province. Sanitary Boards constituted by special orders had been useful, but those Boards had not been able to assist in the more important matter of co-ordinating the sanitary needs of different localities. Rules regulating the constitution and functions of the Provincial Public Health Board were published as an annexure to that circular.

2. *Constitution and Functions.*—The Board as constituted under the terms of that Circular consists of five *ex-officio* members and three members nominated by the Local Government. The nominated members may be either officials or non-officials and are appointed for a term of two years. The first three nominated members were the Hon'ble Mr. J. A. Maung Gyi, Dr. A. Blake and Dr. J. B. Stephens. In February 1923, Maung Pu, M.L.C., and Dr. Ba Yin were appointed in place of the Hon'ble Mr. J. A. Maung Gyi and Dr. J. B. Stephens, resigned. The Board also has power to co-opt experts. The functions of the Board have been laid down as both advisory and administrative, to advise Government on all important public health projects and problems and to assist local authorities with advice in matters falling within its province either *at its own instance* or at the instance of the authorities concerned, and, in its administrative capacity, to distribute the funds placed at its disposal by Government for contributions to public health projects. The Board is to see that these contributions are properly utilized and expended. The Board has power to *initiate* definite projects for urgently needed public health works, and to place such

projects before local authorities, and, if not satisfied with a local authority's action on its recommendations to report the case for the orders of the Local Government. The Board also has power to address local authorities with regard to deficiencies brought to its notice in the administration by such authorities of public health interests in their charge. The Board maintains a programme of public health projects and includes in such programme not only projects sanctioned or under preparation, but also projects which in its opinion should be initiated.

Board Meetings.—The Board met for the first time on the 4th October 1922 and framed rules for conducting its business. Two Standing Committees were formed :—

- (1) the Public Health Projects Committee to deal with all purely technical questions relating to public health engineering projects which it was to examine and submit reports on to the Board. Of this Standing Committee, the Director of Public Health is Chairman and Convenor.
- (2) the Public Health Committee of which the Secretary to the Government of Burma is Chairman and Convenor.

Under Rule 10, the Board is empowered to propose to Government a programme of the work to be undertaken by the Superintending Engineer, Department of Public Health, and his staff and by other agencies indicating the order of priority, both in respect of Government work and work pertaining to local bodies. Under Rule 24, the Board is to be a *co-ordinating agency* to keep in touch with the various societies for the promotion of such activities as infant welfare.

Further meetings were held on the 7th October 1922 and 8th November 1922. At the second meeting in October 1922, it was resolved that the delegation of power to the Board under Devolution Rule 28 be applied for, or alternatively that any funds put at its disposal should be ruled to be an excluded local fund. Under Rule 28 (1) of the Devolution Rules, the Local Government sanctioned the delegation to the Provincial Public Health Board of the financial powers prescribed in Rules 4, 6 and 7 of the rules appended to General Department Circular No. 27 of the 24th July 1922. Rule 6 of these rules provides that the Board may make grants within its sanctioned allotment up to a lump sum of one lakh for any one project within a year. The funds placed at the disposal of the Board have not yet been constituted an Excluded Local Fund. The effect of this is that funds placed at the disposal of the Board and not expended lapse at the end of each financial year.

During 1923 meetings were held in January, April, July and October.

At its sixth meeting in July 1923, the establishment in Rangoon of a sanitary institute was discussed. It was agreed that there was a need for an institute of the kind, and a provision of Rs. 1½ lakhs in 1924-25 budget for building the institute was asked for.

During 1923, the following schemes came before the Board, and the action taken in each case is shown in the table.

Project.	Contribution asked for.	Contribution sanctioned.	If not sanctioned, reason for this.	Remarks.
(1)	(2)	(3)	(4)	(5)
1. Kyaiklat Water Supply Scheme.	$\frac{3}{4}$ of cost, i.e. Rs. 65,625.	..	....	At 7th Meeting the Board resolved that half the cost be granted and half to be taken as loan. This case will be again placed before the Board at the next meeting in connection with the question of empowering the Board to sanction loans.
2. Maintenance of Mawlaik conservancy during 1922-23.	Rs. 900	Rs. 900	....
3. Paletwa jungle clearing.	Rs. 500	Rs. 500	....	Progress report received.
4. Malaria survey in Katha District.	..	..	....	Mr. Feegrade was placed on malaria duty. A sum of Rs. 5,000 was originally placed at the disposal of Director of Public Health for expenditure on the project. The expenditure was subsequently reduced to Rs. 1780-9-0. Mr. Feegrade's report on his investigation into malaria will be placed before the next meeting of the Board.
5. Kyaük-pyu reclamation.	Rs. 2,180	Rs. 2,180	....	This amount was granted for repayment of 4th instalment of loan taken for the scheme.
6. Mawlaik jungle clearing.	Rs. 5,000	Rs. 5,000	....	At first Rs. 2,000 only was sanctioned and on receipt of a report with plan and estimates for a complete scheme the balance of Rs. 3,000 was granted. Progress report received.
7. Bassein Water Supply.	Rs. 20,424	Rs. 20,424	....	Progress report awaited.

Project.	Contribution asked for.	Contribution sanctioned.	If not sanctioned, reason for this.	Remarks.
(1)	(2)	(3)	(4)	(5)
8. Julia Creek Drainage.	$\frac{7}{8}$ of excess cost of revised scheme over original scheme.	..	The Local Government as advised by Finance Committee considered that Government's contribution should be restricted to half the excess of cost over original scheme. The Committee should be given a loan for the balance.	The Akyab Municipal Committee decided to keep this scheme in abeyance till the General Hospital buildings are finished.
9. Maymyo Septic Tank.	Rs. 12,332	Rs. 12,332	....	Work undertaken by P.W.D., and expenditure debited to the P.W.D. Budget.
10. Maymyo Demolition of Dam.	Rs. 400	Rs. 400	....	Completion report received.
11. Pyapôn Water Tank Improvement.	Rs. 20,000	..	The Municipal Committee was asked to submit detailed proposals with final estimated cost of scheme.	Committee's proposals awaited.
12. Construction of Market wall, Maymyo.	Rs. 7,637	Rs. 3818-8-0	The Board at the 6th Meeting resolved to grant half the estimated cost only.	Progress report awaited.
13. Mânnya Fish and Pork Stalls.	Rs. 5,000 as grant and Rs. 10,000 as loan.	..	The Board at the 6th Meeting resolved that as the expected yield per annum of revenue from the stalls amounts to Rs. 1,620, a grant should not be necessary. The whole amount required (Rs. 15,000) should be taken as a loan.	The Committee decided not to apply for a loan.
14. Dry Goods Bazaar, Kambe.	..	..	....	The plan and estimate of the work at an estimated cost of Rs. 30,813 approved by the Board. The cost was to be met from Myaungmya District Cess Fund.
15. Reclamation of certain sites at Mogaung.	Rs. 3,928	..	As the amount was already met from local funds the Board did not sanction the amount required.	

Project.	Contribution asked for.	Contribution sanctioned.	If not sanctioned reason for this.	Remarks.
(1)	(2)	(3)	(4)	(5)
16. Bassein Food stuffs Bazaar.	..	..	....	The Board approved the plans and estimates of the work at an estimated cost of Rs. 71,086. The cost was to be met from contribution in 1911—Rs. 30,000, loan taken in 1921, Rs. 30,000, and from Municipal fund Rs. 11,086.
17 Kyauk-pyu Reclamation.	Rs. 6,000	Rs. 6,000	.....	Progress report received.
18 Wake-ma Trenching Ground Reclamation.	Rs. 12,000	Rs. 12,000	....	Progress report awaited.

J. CLAGUE,—10-4-24,
 Secretary, Provincial Public Health Board, Burma.

APPENDIX C.

Sanitation of Mines.

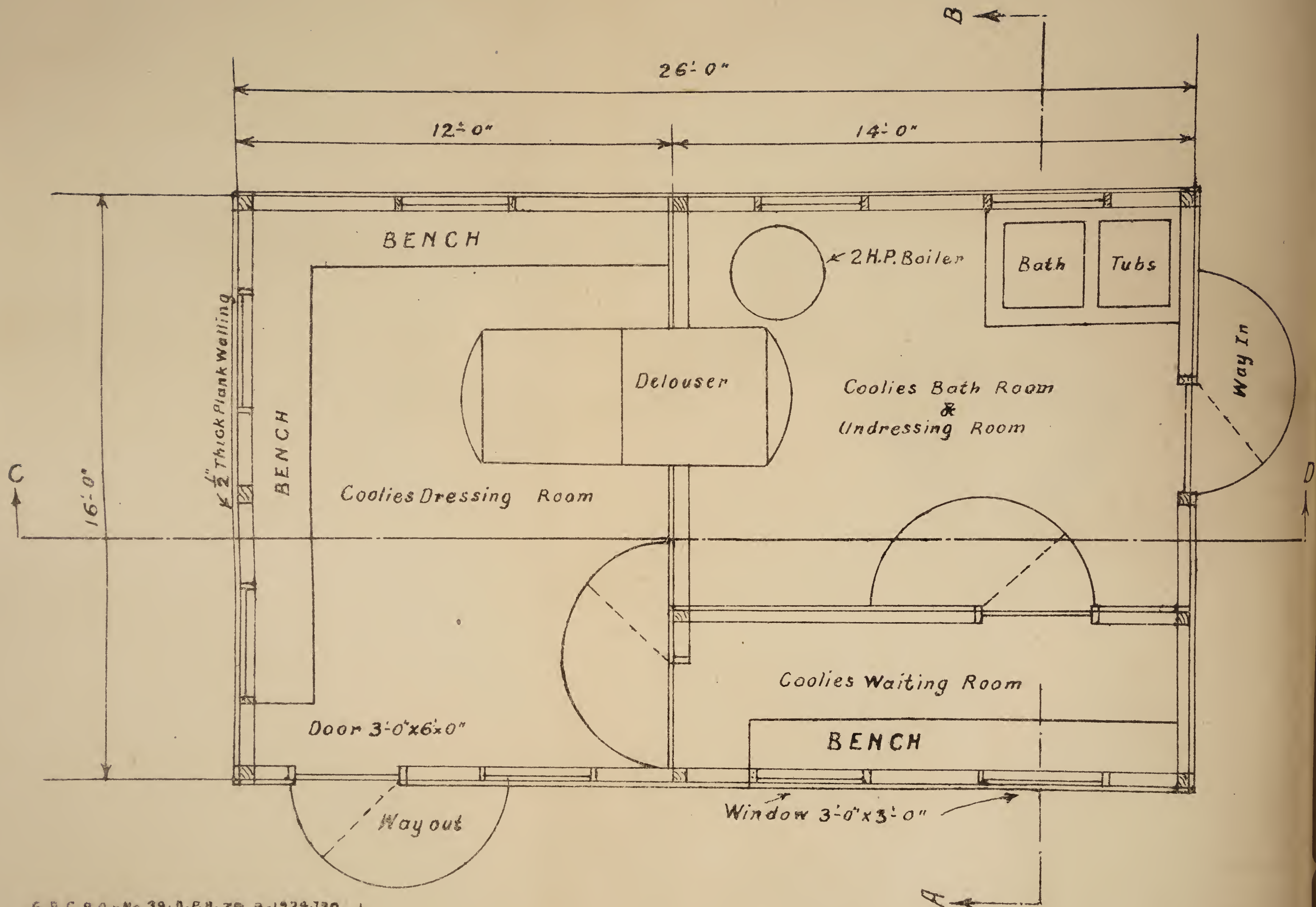
(A) BURMA CORPORATION, NAMTU.

(B) TAVOY AND MERGUI DISTRICTS.

(A) *Namtu*.—The new water supply mentioned in the last year's report is now available, the housing of the staff and employees has received unremitting attention and further additions have been made to the provision and general store in the shape of a bakery and cold storage.

Treatment of Sick.—The new Asiatic Hospital, capable of accommodating 84 patients, was opened in April 1923, by His Excellency Sir Spencer Harcourt Butler, G.C.I.E., K.C.S.I., I.C.S., Governor of Burma. It comprises Medical and Surgical Wards for non-paying patients and wards for better class natives and Anglo-Indians together with a small isolation block for the observation of doubtful cases. The Administrative Block contains Consulting Rooms for the Chief Medical Officer and Assistant Chief Medical Officer, an X-Ray Room and a Bacteriological Laboratory. The whole building is on a water carriage





system of sewerage. The nursing arrangements are under the control of an European Matron under the supervision of the Chief Medical Officer.

The outlying Hospitals are as mentioned in my previous report. A small Laboratory has been affixed to the Bawdwin building and a dispensary has been provided at the Iron Ore Mines at Man-Mak-Lang, two miles from the Company's siding on the Burma Railway line.

An ambulance trolley with accommodation for four lying and two sitting cases is now running on the line Namyao-Bawdwin.

II.—*Infectious Diseases and Provision for dealing with Epidemics.*

A Thresh Disinfector is in process of erection in the Hospital grounds at Namtu.

At Bawdwin a disinfecting apparatus, (diagram appended) has been provided for the purpose of delousing coolies.

The old apparatus formerly in use at Namtu will shortly be transferred to Tiger Camp with the same object in view.

The three chief centres will then be provided with disinfecting apparatus, at two of them capable of dealing with special local needs, whilst at the third the type should be able to meet any calls that may be made on it.

Dealing with special epidemic diseases main attention has been directed to the following, the results of which can be gathered from the remarks appended to each :—

(A) *Plague*.—No case of this disease has occurred in any of the Corporation's area for a period of 18 months. The measures taken for its prevention have comprised (1) periodical rat drives in the bazaars of Panghai and E'hang ; in these drives 780 rats have been killed ; (2) inspection of incoming travellers at Namyao Junction and (3) examination of rats found dead. That epizootic plague exists in the Namtu area is shown by the finding of plague bacilli in the spleens of 4 rats out of 18 examined.

(B) *Cholera*.—No case has occurred in this area since 1918. The Corporation, however, draws its labour from widespread areas and the possibility of cholera carriers has to be faced. Two cases of food poisoning with symptoms closely resembling the disease under question were encountered during the year. The Bacteriological examinations, however, proved negative and the cases recovered.

(C) *Relapsing Fever*.—Ten cases occurred during the early part of the year. In April the delousing station was opened at Bawdwin and systematic delousing and re-delousing of coolies has since then been carried out with the result that the disease has been stamped out. Though sporadic cases may be met with as clinical curiosities nothing in the nature of a serious outbreak menacing the health of the Province is likely to occur whilst these precautions are being taken.

(D) *Typhoid Fever*.—Two cases occurred in Namtu. In one the infection appeared to be derived from contaminated milk sold by an unlicensed *Dudh Wallah*. On examination this milk was found to contain animal and vegetable filth of all kinds including pus cells and to be heavily diluted with water. The patient, a native servant, was in the habit of helping herself from the family supply and drank the milk unboiled. Her employers escaped no doubt owing to their taking the trouble to boil the daily supply.

In the second case the source of infection was not traced.

Both cases ended fatally.

(E) *Small-pox*.—No cases have occurred.

III.—Certain Special Diseases.

(A) *Rabies*.—A case of human rabies occurred during the past year. The patient, a Chinaman, had been bitten in Yünnan by a mad dog six weeks previously and had subsequently walked into Namtu in search of employment. He was admitted into Hospital with the disease well developed and died two days later. The brain was sent to the Pasteur Institute, Rangoon, for examination and was reported to show Typical Negri Bodies of the Human Type.

(B) *Leprosy*.—One case of mixed nodular and nerve leprosy came under observation. The case was of some three years' duration and had been treated in the past as specific disease. As he presented open sores discharging leprosy bacilli in profusion steps were taken to persuade his relatives to send him to a leper asylum.

(C) *Beri-Beri*.—Eleven cases of this disease occurred during the year in question as compared with 48 in the previous year. Two deaths occurred. There has been a steady and gradual improvement in the quality of rice supplied in the bazaars, the old polished Burmese rice being replaced by the unhusked Shan variety.

(D) *Tuberculosis*.—Of the seven definite cases of Tuberculosis found during the year in five the diagnosis was verified by finding Tubercle Bacilli, in one the diagnosis was General Miliary Tuberculosis which was confirmed *post mortem*, and in one case (sputum not examined) the diagnosis was made on very definite physical signs. The occupations of these cases were as follows :—

Cooly	...	Namtu	Outsider	...	Namtu
Brakeman	...	Do.	Fitter Foreman	..	Nampai
Carpenter	...	Do.	Dwight Lloyd Cooly		Namtu
Loco Driver	...	Do.			

No case due to working in the Mine has been met with and no case with any doubt as to the diagnosis has been included in these figures.

(E) *Malaria*.—Ten thousand seven hundred and sixty-eight cases of malaria were treated during the year. Of these 1,497 were in-patients

and 9,271 were out-patients. These figures compare with 1,274 in-patients and 11,801 out-patients or a total of 13,075 cases for 1922.

One case of Black Water fever was met with.

In Namtu 2,124 positive blood examinations revealed Malignant Tertian parasites in 1,417 cases.

Benign Tertian parasites in ... 590 cases.

Quartan ... 117 cases.

In Bawdwin Malaria Parasites were found in 160 cases.

Malignant Tertian parasites in 83 cases.

Benign Tertian parasites in ... 66 cases.

Quartan ... 11 cases.

It is difficult, if not impossible, to estimate the relative incidence of disease acquired locally and that introduced. In Bawdwin, where the liability to acquire malaria is distinctly less than in Namtu, there is a definite increase each year on the arrival of Chinese Coolies. It is not assuming too much that a certain possibly large percentage of these have become infected in their transit from Yunnan.

In Namtu an examination of spleens in children attending the local Anglo-Vernacular School showed that out of 39 children under the age of ten, eleven presented splenic enlargement of varying extent up to a maximum of five fingers breadth below the costal margin. Of these eleven cases, one occurred under 5 years and the remainder between 5 and 10 years. The figures, however, are too small to draw any general conclusion.

Occupational Diseases.

Miners' Phthisis.—This has already been referred to under the heading of Tuberculosis.

Ankylostomiasis.—No case of this occurred during the year.

Plumbism.—The number of cases of this disease showed a very marked decrease as compared with the previous year, only 128 cases being treated as compared with 330 in 1922. All were uniformly mild, slight colic and a lead line being the usual symptoms.

J. P. CULLEN, M.D. (Lond.), D.P.H.,
Chief Medical Officer, Burma Corporation, Namtu,
Northern Shan States.

(B) *Tavoy District.*—Little work seems to have been done in the mines of the Tavoy District owing to the low value of wolfram. Hermyingyi, which is one of the important mines in the District and which was visited by the Civil Surgeon, was being worked at a loss, and suggested improvements to the hospital and for the housing of miners had therefore been postponed. The health of the camp has nevertheless remained good. A clear and uncontaminated piped water

supply, and efficient conservancy are specially mentioned by the Civil Surgeon. Food supplies are reported to be abundant, and wholesome. Two other mining camps at Kanbauk and Kalonta were also inspected by the Civil Surgeon. At Kanbauk Cooly Camp, which is situated to the south of the mining area, the accommodation consists of a few temporary houses and the camp is again reported as over-crowded; but another camp to the north of the mining area is stated to be more satisfactory, water supply, from a protected well being good. The dispensary is still in charge of a compounder and the appointment of a qualified medical officer is a matter calling for the immediate attention of the Mining Company, who have been addressed on the subject.

The mine at Kalonta is being worked by a contractor and supervised by an officer of the Burma Finance and Mining Co., Ltd., to whom the mine belongs. Most of the houses here are again reported to be in a dilapidated condition and the water supply, which is from a neighbouring stream, is open to contamination. The Burma Finance and Mining Co., Ltd., has been addressed on the subject.

In Mergui District no mine was inspected during the year and the Civil Surgeon had nothing of special importance to report. A few cases of beri-beri were noted and the Civil Surgeon has been asked to inspect at an early date.

APPENDIX D.

Annual Report of the Transactions of the Port Health Department, Rangoon, for the Year 1923.

INSPECTION OF IN-COMING VESSELS.

Vessels that arrived from Indian, Foreign and Riverine Ports numbered 1,395 or 46 less than in 1922 and they carried 342,233 passengers or 21,196 more than in 1922. Of the above vessels 1,058 were from Indian Ports and 328 from Foreign Ports against 1,126 and 305 respectively in 1922.

Vessels Visited : (a) *Sea-Going*.—These numbered 1,386, a decrease on 1922 of 26. They carried 127,249 members of the crew and 342,161 passengers making a total of 469,410 inspected. The total number of person inspected including out-going is 529,825.

Regulations under which they were visited are :—A. *General Department Notification No. 73, dated 13th March 1917 (Parts I to VII)*.—Thirty-eight vessels came under this Regulation and included the following reports :—

(i) *Infectious Diseases*.—Thirty-four cases of infectious diseases (15 less than in 1922) were reported by the commanders of 28 vessels including 6 cases of cholera (on 6 vessels) of which 2 died and buried at sea, two landed at other ports and 2 were sent to hospital in Rangoon.

The other cases reported included 6 cases of Small-pox (on 5 vessels) 12 cases of chicken-pox (on 9 vessels), 5 cases of measles (on 5 vessels), 3 cases of mumps (on 1 vessel) and 2 cases of typhoid (on 2 vessels). Out of the above cases 6 cases of chicken-pox and two cases of measles were landed at other ports and the remaining were removed to hospitals in Rangoon. On the above 28 vessels 3 more infectious cases were detected at the medical inspection, *i.e.*, 2 cases of cholera and one case of chicken-pox.

(ii) Eleven deaths from non-infectious diseases were reported on 10 vessels.

(iii) *Suspicious Illness*.—One hundred and sixteen cases were reported and these after observation proved to be non-infectious.

B. *Vaccination Act*, 1909.—Vessels inspected under this Act were 448 in number. On 41 of these vessels 53 cases of infectious diseases were detected during the inspection *viz.*, cholera 1, small-pox 7, chicken-pox 34, measles 7, mumps 2 and typhoid 1 and one cerebro-spinal fever, one case of plague and one case of cholera developed in hospital among the suspects sent for observation.

C. The number of extra vessels inspected under Notification No. 229, dated the 6th September 1919 (making it incumbent on all vessels entering Rangoon from any port to undergo inspection as a precaution against the spread of acute pneumonia and influenza) but not liable to inspection under one of the foregoing clauses, comprised 900 cargo and passenger vessels. Of these 148 were oil steamers of the oil companies which moored below the Hastings Shoal and were inspected by the Works Doctors who sent their reports to this office. One case of measles and one case of chicken-pox developed in hospital among the suspects sent for observation.

Plague.—One case of plague developed in hospital.

Cholera.—One case of cholera developed in hospital.

Measures.—As a result of the visits paid under the Regulation referred to in paragraph 3 the following measures were carried out :—

(1) *Inspections*.—The number of passengers inspected was 329,811 as follows :—

Under Vaccination Act	...	...	...	271,851
Under Vaccination Act (non-labourers exempted)				36,166
Under Influenza Notification	...	...	...	21,794

The auxiliary temperature of 5,646 persons were tested and 2,745 cases were found normal.

The following were the results of these measures :—

(a) Infectious cases reported and detected aggregated 94 *viz.*, plague 1, cholera 10, small-pox 13, chicken-pox 48, measles 13, mumps 5, cerebro spinal fever 1, typhoid 3. Of these 60 cases were detected during the inspections under the current notifications under the Vaccination and Influenza Notification.

(b) *Inflamed and Enlarged Glands*.—Twenty-four cases were sent for examination of gland tissue, no plague bacilli was detected.

(c) *Suspects sent to Hospital* for observation for temperature, diarrhoea and undefined skin rashes numbered 2,797.

(d) Out of 2,797 cases sent for observation, 64 cases of influenza and 31 cases of dengue fever developed.

(2) *Disinfection*.—(a) of effects of 614 members of the crew and 2,693 passengers of infected vessels was carried out.

(b) Disinfection of 592 vessels was carried out of which 79 were washed down with disinfectant solution for infectious diseases.

(3) *Fumigation*.—The vessel from which a case of plague developed in hospital had left this port before the case was diagnosed and precautionary measures were carried out in Calcutta.

(4) *Vaccination*.—Labourers and crew numbering respectively 271,851 and 51,534 were inspected for the presence of good, old or recent vaccination marks. Of the former 23,134 and of the latter 82 were vaccinated on arrival by the Municipal Vaccinators.

(5) Segregation can only be imposed against vessels which arrive plague infected.

(6) *Vessels Visited*. (b) *Riverine*.—Nine vessels reported the occurrence of infectious or suspicious disease and underwent the usual measures—1 for plague, 3 for cholera, 4 for small-pox and 1 for ordinary death. One vessel underwent fumigation by burning sulphur in the holds.

(7) *Vessels in the Harbour Visited*.—Seven vessels underwent disinfection measures—4 for cholera, 2 for chicken-pox and 1 for suspicious illness.

INSPECTION OF OUT-GOING VESSELS.

Those proceeding to ports out of India numbered 463 or 3 less than in 1922. All the 28,499 Asiatic and African members of crew and the 13,879 deck passengers on these vessels had their effects disinfected, and the 40,447 members of the crew and 19,968 passengers including Europeans were inspected. The 3,219 luggage coolies were inspected and their body clothes and uniforms disinfected prior to their handling passengers' luggage. Temperatures were tested on 438 passengers and 166 were found normal while 173 were allowed to embark on the commanders responsibility. Two hundred and ninety-nine passes were given to relatives of passengers to see their friends off.

Results.—Two cases of plague, 1 case of measles, 1 case of mumps, 8 cases of influenza, 1 case of dengue and 86 cases of suspicious rise of temperature were detained and sent to hospital for observation and treatment.

No cases of plague are known to have developed among the crew and passengers of these vessels on their outward voyages. The vessels in which the crew's quarters had not previously been cleaned were cleaned prior to issue of the Bill of Health.

Inspection of Measures to prevent the ingress of rats into vessels at wharves was frequently carried out.

New members of the Crew inspected prior to signing on the Ship's Articles were 2,417 and of these 2,354 were passed fit and 63 rejected, 32 for gonorrhoea, 2 for cancre, 2 for syphilis, 1 for bubo, 5 for hernia, 2 for hydrocele, 2 for tuberculosis and 17 for skin diseases.

Fumigation of Vessels at Agent's Request.—Fourteen vessels were fumigated while empty, 496 rats were destroyed ; 20 rats were sent for bacteriological examination for plague bacilli with negative results. Seven vessels required fumigation in order to comply with measures in force at ports of destination, and the others were fumigated on account of rats on board. *Fend-off Certificates* were requested by the Agents of Several steamers. Action was taken to see that the requirements were duly carried out.

MISCELLANEOUS TRANSACTIONS AND REMARKS.

Examination of Port Commissioners Officers and Employees.—The Medical Board assembled once to report on the health of Mr. Robertson, Pilot, for fitness of extension of service. He was recommended an extension of one year. Examination was carried out of 89 candidates on 89 separate occasions for fitness to join the service of whom all passed fit.

Infectious diseases diagnosed among the employees of the Port Commissioners, Establishment included plague 2, small-pox 3, chicken-pox 23, measles 2, mumps 7, influenza 234 and dengue 4.

Port Commissioners' Dispensary.—The Dispensary was opened in 1921. It is staffed as in 1921. A clerk was entertained to carry out the Medical and Sanitary clerical work with effect from the 1st April 1923. The daily average attendance of old and new cases was 66.51 making a total of 20,951.

Sanitation of the Port Commissioners' Fore-shore.—The sanitation of the Port Area was undertaken by the Port Health Officer. The Port Commissioners supplied the following staff :—

Sanitary Inspector	...	...	1
Assistant Sanitary Inspectors	...	...	2
Jemadars	...	...	2
Maistries	...	...	5
Conservancy	...	...	40
Rat Smoking	...	...	7
Rat Trapping	...	...	5
General Cleaning	...	...	12

Very useful work had been done and the sanitation of the Port Commissioners' Area has improved considerably.

Vaccination.—The whole of the Port Commissioners' employees, over 2,500 in number, were examined for the vaccination and 1,098 were vaccinated. The vaccination programme started on the 20th February and was completed on 3rd March 1923. There were no further cases of small-pox and chicken-pox after the vaccination.

Ratting and Trapping (200 traps) has given us 6,722 rats. A detail of work is as follows :—

Number of rats destroyed by smoking	...	2,269
Number of rats destroyed by trapping	...	4,453
Number of rats holes destroyed	...	4,964

Rat Destruction and Port Commissioners' Area.—The system is the same as in 1921.

Port Health Department Employees and Plague Police who reported sick were 146.

The total cases of Infectious Diseases dealt with by this Department was 512 of which 317 were influenza and 36 dengue fever.

The Disinfecting Stove was closed for 1,194 hours.

The Non-Infectious Diseases dealt with numbered 4,934 or 85 more than in 1922.

Port Health Staff.—This report covers a considerable amount of work done sometimes under very trying conditions. My staff headed by Drs. Writer, Anklesaria, Bayley de Castro and Sub-Assistant Surgeon Rauf have always ably helped me. Clerks Haq and Muthu also deserve special mention.

C. G. CROW,
Port Health Officer, Rangoon.

TABLE NO. I.—Statement showing In-coming Sea-going Vessels visited during the year ending the 31st December 1923.

Months.	From Indian Ports.						From Foreign Ports.						Total.								
	(1)	(2)	Number of crew.	Number of Passengers.				(9)	(10)	Number of Passengers.				(16)	(17)						
				Males.	Females.	Boys.	Girls.			Total.	Males.	Females.				Boys.	Girls.	Total.			
																			(4)	(5)	(6)	(7)	(8)	(11)	(12)	(13)	(14)	(15)
1923.																					
January	...	87	7,919	21,622	1,587	486	406	24,101	26	2,432	1,230	452	126	81	1,889	113	10,351				
February	...	95	8,363	24,094	1,932	599	506	27,131	23	2,475	936	471	68	39	1,514	118	10,838				
March	...	114	9,761	16,844	1,773	509	403	19,529	24	2,501	948	451	60	42	1,501	138	12,262				
April	...	105	9,264	17,019	1,749	529	534	19,831	27	2,942	2,030	746	182	97	3,055	132	12,206				
May	...	83	7,985	17,128	1,803	618	549	20,098	31	2,656	1,353	285	164	87	1,889	114	10,641				
June	...	77	7,183	18,348	1,399	446	377	20,570	28	2,463	798	117	48	20	983	105	9,646				
July	...	78	7,536	16,670	1,437	404	426	18,937	30	2,485	906	167	57	35	1,165	108	10,021				
August	...	79	7,420	18,313	1,454	475	406	20,648	20	1,854	767	92	25	23	907	99	9,274				
September	...	77	7,210	26,175	1,969	718	557	29,419	36	2,975	998	161	71	42	1,272	113	10,185				
October	...	92	8,565	25,840	2,090	777	605	29,312	24	2,070	1,030	300	71	50	1,451	116	10,635				
November	...	80	7,407	36,503	1,807	643	482	39,435	29	2,673	1,713	473	226	123	2,535	109	10,080				
December	...	91	8,372	49,062	2,474	899	688	53,123	20	2,738	1,172	438	160	96	1,866	121	11,110				
Total	...	1,058	96,985	287,618	21,474	7,103	5,939	322,134	328	30,264	13,881	4,153	1,258	735	20,027	1,386	127,249				

TABLE NO. I.—Statement showing In-coming Sea-going Vessels visited during the year ending the 31st December 1923—concl'd.

Medical Inspection and observation.																	
Months.	(1)	Total.					Total inspected.			For temperature.		For Vaccination.			Disinfection.		
		Number of Passengers.					Crew. (23)	Passen- gers. (24)	Tested. (25)	Sick. (26)	Crew.		Passengers.		Vessels. (31)	Effects of	
		Males. (18)	Females. (19)	Boys. (20)	Girls. (21)	Total. (22)					Found protected. (27)	Vaccina- ted in wharf. (28)	Found protected. (29)	Vaccina- ted in wharf. (30)		Crew. (32)	Passen- gers. (33)
1923.																	
January	...	32,852	2,039	612	487	25,990	9,109	24,768	364	147	4,661	...	18,766	1,522	53	155	1,089
February	...	25,030	2,403	667	545	28,645	9,581	27,497	375	145	4,327	8	21,331	1,551	45	...	...
March	...	17,792	2,224	569	445	21,030	10,890	19,818	288	125	4,107	1	14,219	1,020	45	77	78
April	...	19,049	2,495	711	631	22,886	10,761	21,696	403	176	4,492	24	14,307	1,386	51	122	9
May	...	18,481	2,088	782	636	21,987	9,401	20,691	345	176	4,606	25	14,349	1,434	53	...	695
June	...	19,146	1,516	494	397	21,553	8,391	20,709	371	195	3,677	2	15,511	1,658	42	140	...
July	...	17,576	1,604	461	461	20,102	8,941	19,375	382	163	3,911	11	13,889	1,513	47	...	...
August	...	19,080	1,546	500	429	21,555	8,024	20,917	334	183	4,237	4	16,051	1,528	49	73	...
September	...	27,173	2,130	789	599	30,691	8,939	30,024	562	340	3,897	3	23,058	2,297	54	...	...
October	...	26,870	2,390	848	655	30,763	9,220	29,752	582	332	4,412	1	22,651	1,926	51	...	...
November	...	38,216	2,280	869	605	41,970	8,953	40,023	762	404	4,492	3	31,258	3,051	50	...	...
December	...	50,234	2,912	1,059	784	54,989	9,626	53,641	878	515	4,033	...	43,427	4,248	52	47	822
Total	...	301,499	25,627	8,361	6,674	342,161	111,836	329,811	5,646	2,901	51,452	82	248,717	23,134	592	614	2,693

TABLE NO. II —Statement showing the work done in connection with Out-going Vessels bound for Ports beyond India during the year ending the 31st December 1923.

Months	Shore Inspection.															Results of Inspection.				
	(1)	(2)	Deck Passengers.				(9)	Saloon Passengers.				(15)	(16)	Temperature			(20)			
			(3)	(4)	(5)	(6)		(7)	(8)	(10)	(11)			(12)	(13)	(14)		(17)	(18)	(19)
		Asiatic crew.	Males.	Females.	Boys.	Girls.	Total.	European crew.	Males.	Females.	Boys.	Girls.	Total.	Passes to relatives and friends.	Baggage coolies.	Tested.	Normal.	Allowed on m. c. or at Commander's request.	Cases detained.	
1923.																				
January	...	27	1,915	829	93	54	30	1,006	726	322	203	35	30	590	25	284	26	10	15	1
February	...	42	2,476	787	64	22	24	897	949	358	222	27	24	631	22	230	20	11	7	2
March	...	52	2,843	693	57	31	16	797	1,819	506	339	65	71	981	60	306	22	9	9	4
April	...	47	2,712	967	149	78	41	1,235	1,118	412	219	85	54	770	45	392	42	12	20	10
May	...	37	2,668	1,370	157	82	67	1,676	856	387	206	65	57	715	45	383	55	24	23	8
June	...	39	2,324	652	49	32	18	751	815	212	67	21	18	318	13	236	24	3	12	9
July	...	40	2,360	1,040	97	37	45	1,219	1,006	215	93	33	22	353	10	324	26	6	11	9
August	...	37	2,388	1,142	78	22	18	1,260	1,015	233	77	21	26	357	17	266	72	30	24	18
September	...	40	2,354	1,401	154	74	47	1,676	1,003	176	69	17	13	275	18	205	42	10	19	13
October	...	32	1,993	915	83	24	31	1,053	819	197	101	25	32	355	10	194	16	3	7	6
November	...	33	2,170	847	91	32	31	1,001	942	239	95	28	20	382	10	234	34	15	9	10
December	...	37	2,296	1,123	94	63	28	1,308	880	210	106	23	23	362	24	165	59	33	17	9
Total	...	463	28,499	11,766	1,166	551	396	13,879	11,948	3,467	1,797	435	390	6,089	299	3,219	438	166	173	99

TABLE NO. II.—Statement showing the work done in connection with Out-going Vessels bound for Ports beyond India during the year ending the 31st December 1923—concl'd.

Months.	Diseases.						Disposal of sick.					Disinfection.				Fumigation with Clayton apparatus at Agents' request.				
	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)	(31)	(32)	(33)	(34)	(35)	(36)	(37)	(38)	(39)	(40)
	Plague.	Mumps.	Measles.	Dengue.	Influenza.	Fever and other ailments.	Civil General Hospital.	Contagious Disease Hospital.	Municipal Observation Hospital.	Passengers' Residence.	Agents' care.	Indian Station Hospital.	Asiatic crew and Deck passengers' effect.	Boots and shoes.	Boxes.	Baggage coolies.	Vessels.	Sulphur consumed.	Time spent.	Rs.
1923.																				
January	...	...	...	...	...	1	...	...	1	...	...	...	2,921	723	576	284	...	...	...	...
February	...	...	...	...	...	2	...	...	1	1	...	...	3,373	1,335	990	230	1	500	12	275
March	...	...	...	...	...	4	...	...	3	1	...	...	3,640	1,501	1,176	306	2	1,390	36	605
April	...	...	1	...	...	9	...	1	9	...	...	...	3,947	1,305	922	392	...	...	...	...
May	...	1	...	...	...	7	...	...	8	...	...	...	4,344	997	766	383	1	360	11	220
June	2	...	...	...	...	7	3	2	4	...	...	...	3,075	1,195	779	236	3	1,185	22	610
July	...	...	...	...	1	8	...	...	6	1	2	...	3,579	1,084	927	324	...	...	...	...
August	...	...	...	...	3	15	...	1	17	...	...	...	3,648	965	772	266	1	475	12	275
September	...	...	...	...	1	12	4	...	9	...	...	...	4,030	900	814	205	1	865	19	330
October	...	...	...	1	1	4	1	1	3	...	...	1	3,046	826	746	194	2	550	13	275
November	...	...	...	...	1	9	1	...	8	1	...	...	3,171	732	672	234	1	580	12	220
December	...	...	...	...	1	8	2	...	7	...	...	...	3,604	1,063	890	165	2	1,349	32	665
Total	2	1	1	1	8	86	11	5	76	4	2	1	42,378	12,626	10,030	3,219	14	7,254	169	3,475

TABLE NO. III.—Statement showing the Infectious and other diseases reported and detected on Incoming Vessels and those in Port during the year ending the 31st December 1923.

Diseases.	Sea-going.			Riverine.		In Port.		Disposal of cases.							Corpses.					
	No. of vessels.	Cases.		No. of vessels.	Cases.	No. of vessels.	Cases.	Hospitals.				Left on Board.	Left at other Ports.	Total.		Buried at sea.	Rangoon Mortuary.	Total.		
		Total.	Reported.					Detected.	Contagious Diseases	Observation.	Rangoon General Hospital.								Military.	Residences.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	
Plague	1	1	...	1	1	1	...	...	2	...	...	...	...	...	2	2	...	...	...
Cholera	8	10	6	4	3	7	4	5	11	2	...	...	...	...	15	5	...	...	7
Small-pox	12	13	6	7	4	6	...	...	15	...	...	...	...	...	19	...	...	...	...
Chicken-pox	40	48	12	6	...	...	2	2	42	...	...	...	2	...	50	...	...	...	...
Measles	10	13	5	8	...	...	...	...	10	1	...	...	...	...	13	...	...	...	...
Mumps	2	5	3	2	...	...	...	...	5	1	...	...	...	...	5	...	...	...	...
Cerebro spinal	...	1	...	1	...	...	...	...	...	1	...	...	1	...	1	...	...	...	...
Typhoid	3	3	2	1	...	...	...	...	...	...	2	...	...	...	3	...	...	...	...
Influenza	52	64	...	64	...	...	...	...	...	64	...	...	...	...	64	...	...	...	...
Dengue	13	31	...	31	...	...	...	...	...	3	25	...	...	3	...	31	...	...	...
Suspicious illness	...	2,658	116	2,542	...	1	1	3	20	2,378	5	31	162	57	...	2,662	...	...	...
Ordinary illness	...	44	...	44	...	...	...	...	...	...	41	...	...	3	...	44	...	...	...
Glands	...	24	...	24	...	...	...	...	...	24	...	...	...	...	...	24	10	2	12
Deaths (ordinary)	10	11	11	...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Total	151	2,926	161	2,765	9	16	7	10	114	2,473	73	31	165	63	14	2,933	12	7	19	

STATEMENT A.

Statement showing the Income and Expenditure on Civil Sanitary Works for the financial year 1922-23.

Name of Division.	Total Income.	Total Expenditure.	Amount spent on			
			Water supply.	Drainage.	Conse- rvancy.	Other Sanitary Works.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Towns in—						
Arakan Division ...	2,81,749	1,57,767	48,735	39	86,357	22,696
Rangoon Division ...	1,02,19,052	39,67,457	18,03,413	3,58,895	14,05,636	3,99,513
Pegu Division ...	18,10,388	4,33,926	1,60,038	2,348	2,36,303	34,437
Irrawaddy Division ...	17,13,516	2,78,648	18,241	9,287	1,46,179	1,04,941
Tenasserim Division ...	11,73,929	1,52,635	25,751	...	1,25,547	1,337
North-West Border Division.	4,79,578	1,41,899	19,172	1,119	90,149	31,459
Mandalay Division ...	25,56,868	3,44,591	71,603	17,566	1,96,250	59,166
North-East Frontier Division.	2,12,569	79,871	5,920	3,406	45,946	24,599
Total ...	1,84,47,649	55,55,894	21,52,879	3,92,560	23,32,367	6,78,038
Districts in—						
Arakan Division ...	8,22,503	59,245	175	9,970	1,653	47,447
Rangoon Division ...	13,20,329	23,630	...	999	18,583	4,048
Pegu Division ...	23,30,302	37,031	12,652	...	7,262	17,117
Irrawaddy Division ...	64,72,616	26,169	2,125	374	12,968	10,702
Tenasserim Division ...	9,19,421	11,266	115	...	9,705	1,446
North-West Border Division.	14,03,619	55,651	8,411	...	38,833	8,407
Mandalay Division ...	10,98,539	82,388	12,717	1,398	43,780	24,493
North-East Frontier Division.	2,83,270	56,590	1,057	3,460	43,779	8,294
Total ..	1,46,50,649	3,51,970	252	16,201	1,76,563	1,21,954
GRAND, TOTAL ...	3,30,98,293	59,07,864	21,90,131	8,761	25,08,930	8,00,042

ANNUAL STATEMENT NO. I.—*Births registered in the*

1	2	3			4		
No.	Division and District.	POPULATION ACCORDING TO CENSUS OF 1921.			NUMBER OF BIRTHS REGIS- TERED.		
		Male.	Female.	Total.	Male.	Female.	Total.
ARAKAN DIVISION.							
1	Akyab ...	308,317	265,723	574,040	7,375	6,793	14,168
2	Kyaukpyu ...	96,567	103,304	199,873	2,212	2,048	4,260
3	Sandoway ...	55,304	56,725	112,029	2,090	1,964	4,054
RANGOON DIVISION.							
4	Rangoon ...	236,689	105,273	341,962	3,153	2,971	6,124
5	Insein ...	156,794	136,289	293,083	4,838	4,380	9,218
6	Hanthawaddy ...	201,043	163,581	364,624	5,618	5,098	10,716
PEGU DIVISION.							
7	Tharrawaddy ...	246,261	246,168	492,429	7,736	7,266	15,002
8	Pegu ...	235,324	210,296	445,620	6,132	5,776	11,908
9	Prome ...	182,803	188,772	371,575	5,708	5,278	10,986
10	Toungoo ...	197,565	184,378	381,883	4,564	4,324	8,888
11	Thayetmyo ...	125,283	130,123	255,406	3,863	3,448	7,251
IRRAWADDY DIVISION.							
12	Bassein ...	252,947	236,526	489,473	6,112	5,632	11,744
13	Henzada ...	273,439	277,481	550,920	9,547	9,063	18,610
14	Myaungmya ...	196,757	173,794	370,551	5,406	5,271	10,677
15	Ma-ubin ...	163,513	161,693	330,106	5,192	4,918	10,110
16	Pyapôn ...	156,721	132,273	288,994	3,286	3,098	6,384
TENASSERIM DIVISION.							
17	Thatôn ...	245,909	225,191	471,100	6,800	6,371	13,171
18	Amherst ...	223,348	194,562	417,910	5,940	5,428	11,368
19	Tavoy ...	80,994	75,792	156,786	3,032	2,773	5,805
20	Mergui ...	72,878	62,587	135,465	2,229	2,010	4,239
NORTH-WEST BORDER DIVISION.							
21	Pakôkku ...	223,943	241,828	465,771	8,674	8,455	17,129
22	Shwebo ...	184,708	206,576	391,284	7,037	6,717	13,754
23	Sagaing ...	155,054	171,854	326,908	4,636	4,698	9,334
24	Lower Chindwin ...	156,693	186,187	342,880	6,478	6,475	12,953
MANDALAY DIVISION.							
25	Mandalay ...	182,999	173,622	356,621	7,417	6,919	14,336
26	Kyauksè ...	70,449	72,228	142,677	2,808	2,581	5,389
27	Meiktila ...	137,573	152,324	289,897	3,632	3,644	7,276
28	Yamèthin ...	160,919	162,276	323,189	6,054	5,822	11,876
29	Myingyan ...	213,294	228,714	442,008	6,420	6,452	12,872
30	Magwe ...	211,686	211,566	423,252	5,752	5,266	11,018
31	Minbu ...	134,495	139,807	274,302	4,400	4,395	8,795
Total		5,545,205	5,277,413	10,822,618	164,081	155,328	319,409

districts of Burma during the year 1923. (Paragraph 10).

5			6	7	8	9			No.
RATIO OF BIRTHS PER THOUSAND OF POPULATION.			Number of males born to every hundred females.	Excess of births over deaths per thousand of population.	Excess of deaths over births per thousand of population.	MEAN RATIO OF BIRTHS PER THOUSAND DURING PREVIOUS FIVE YEARS.			
Male.	Female.	Total.				Male.	Female.	Total.	
12.85 11.07 18.66	11.83 10.25 17.53	24.68 21.31 36.19	109 108 106	8 6 16	... ... ...	14.54 12.46 18.90	13.48 11.50 17.17	28.02 23.96 36.07	1 2 3
9.22 16.51 15.41	8.69 14.94 18.98	17.91 31.45 29.39	106 110 110	... 11 10	17	10.35 15.95 15.00	9.53 14.97 14.13	19.88 30.92 29.14	4 5 6
15.71 13.76 15.36 11.95 14.89	14.76 12.96 14.20 11.32 13.50	30.47 26.72 29.57 23.27 28.39	106 106 103 106 110	10 6 6 7 5	... ... ... ... ...	17.05 16.47 14.71 15.42 17.46	16.26 14.98 14.20 14.46 16.53	33.31 31.45 28.91 29.88 33.99	7 8 9 10 11
12.49 17.33 14.59 15.73 11.37	11.51 16.45 14.23 14.90 10.72	23.99 33.78 25.81 30.63 22.09	109 105 103 106 103	7 14 10 12 6	... ... ... ... ...	11.25 16.69 14.10 14.94 12.53	10.10 16.78 13.25 14.04 11.60	21.35 33.47 27.35 28.97 24.14	12 13 14 15 16
14.43 14.21 19.34 16.45	13.52 12.98 17.69 14.84	27.96 27.19 37.02 31.29	107 110 109 111	11 11 12 12	... ... ... ...	14.01 16.26 19.46 17.46	13.46 14.93 18.55 16.57	27.53 31.19 38.01 34.03	17 18 19 20
18.62 17.98 14.18 18.89	13.15 17.17 14.37 18.88	36.78 35.15 28.55 37.78	103 105 99 100	16 14 8 15	... ... ... ...	20.70 19.77 16.27 18.73	20.47 19.25 15.91 18.27	41.16 39.03 32.19 37.00	21 22 23 24
20.80 19.68 13.63 18.73 14.52 13.59 16.04	19.40 18.08 12.57 18.01 14.60 12.44 16.02	40.20 37.76 25.10 36.75 29.12 26.03 32.06	107 109 100 104 100 109 100	3 4 6 9 13 7 5	... ... ... ... ... ... ...	19.98 19.89 14.83 17.37 15.00 16.72 17.66	19.13 13.73 14.25 16.76 14.37 15.66 16.54	39.11 38.62 29.08 34.13 29.36 32.38 34.20	25 26 27 28 29 30 31
15.16	14.85	29.51	106	9	...	15.99	15.20	31.19	

ANNUAL STATEMENT NO. II.—*Statement of Births and Deaths registered*

1	2	3	4	5			6		7		
Serial No.	Divisions and Districts.	Area in square miles.	Average population per square mile.	POPULATION (CENSUS 1921).			BIRTHS.		NUMBER OF DEATHS REGISTERED.		
				Male.	Female.	Total.	Total number.	Birth-rate per thousand of population	Male.	Female.	Total.
ARAKAN DIVISION.											
1	Akyab ...	5,056	113.54	308,317	265,723	574,040	14,168	24.68	5,169	4,597	9,766
2	Kyaukpyu ...	4,387	45.56	96,569	103,304	199,873	4,260	21.31	1,596	1,476	3,072
3	Sandoway ...	3,784	29.61	55,304	56,725	112,029	4,054	36.19	1,148	1,132	2,280
RANGOON DIVISION.											
4	Rangoon ...	76	4,499.50	236,689	105,273	341,962	6,124	17.91	7,664	4,254	11,918
5	Insein ..	1,904	158.99	156,794	136,289	293,083	9,218	31.45	3,271	2,739	6,010
6	Hanthawaddy ...	1,866	195.40	201,043	163,581	364,624	10,716	29.39	3,854	3,091	6,945
PEGU DIVISION.											
7	Tharrawaddy ...	2,863	172.00	246,261	246,168	492,429	15,002	30.47	5,174	4,808	9,982
8	Pegu ...	4,083	109.14	235,324	210,296	445,620	11,908	26.72	5,057	4,215	9,272
9	Prome ...	2,915	127.47	182,803	188,772	371,575	10,986	29.57	4,465	4,117	8,582
10	Toungoo ...	6,135	62.25	197,505	184,378	381,883	8,888	23.27	3,454	2,948	6,402
11	Thayetmyo ...	4,750	53.77	125,283	130,123	255,406	7,251	28.39	3,031	2,857	5,888
IERAWADDY DIVISION.											
12	Bassein ...	4,127	118.60	252,947	236,526	489,473	11,744	23.99	4,396	3,745	8,141
13	Henzada ...	2,872	191.82	273,439	277,481	550,920	18,610	33.78	5,690	5,328	11,018
14	Myaungmya ...	2,650	139.85	196,757	173,794	370,551	10,677	28.81	3,766	3,098	6,864
15	Ma-ubin ...	1,640	201.28	168,513	161,593	330,106	10,110	30.63	3,213	2,858	6,071
16	Pyapôn ...	2,148	134.54	156,721	132,273	288,994	6,384	22.09	2,767	2,026	4,793
TENASSERIM DIVISION.											
17	Thatôn ...	4,831	97.52	245,909	225,191	471,100	13,171	27.56	4,120	3,665	7,785
18	Amherst ...	7,059	59.20	223,348	194,562	417,910	11,363	27.19	3,670	2,963	6,633
19	Tavoy ...	5,308	29.54	80,994	75,792	156,786	5,805	37.02	1,993	1,866	3,859
20	Mergui ...	9,789	13.84	72,878	62,587	135,465	4,239	31.29	1,454	1,161	2,615
NORTH-WEST BORDER DIVISION.											
21	Pakôkku ...	6,210	75.00	223,943	241,828	465,771	17,129	36.78	4,914	4,869	9,783
22	Shwebo ...	5,714	68.48	184,708	206,576	391,284	13,754	35.15	4,146	4,048	8,194
23	Sagaing ...	1,825	179.13	155,054	171,854	326,908	9,334	28.55	3,408	3,410	6,818
24	Lower Chindwin ...	3,480	98.53	156,693	186,187	342,880	12,953	37.78	3,757	4,032	7,819
MANDALAY DIVISION.											
25	Mandalay ...	2,117	168.45	182,999	173,622	356,621	14,336	40.20	6,905	6,451	13,356
26	Kyaukse ...	1,282	111.29	70,449	72,238	142,677	5,338	37.76	2,381	2,412	4,793
27	Meiktila ...	2,287	126.76	137,573	152,324	289,897	7,276	25.10	2,802	2,602	5,404
28	Yamèthin ...	4,176	77.39	160,913	162,276	323,189	11,876	36.75	4,595	4,311	8,906
29	Myingyan ...	2,746	160.96	213,294	228,714	442,008	12,872	29.12	3,594	3,711	7,305
30	Magwe .	3,687	114.80	211,686	211,566	423,252	11,018	26.03	4,172	3,939	8,105
31	Minbu ...	3,299	83.30	134,495	139,807	274,302	8,795	32.06	3,849	3,625	7,474
Total ...		115,060	94.06	5,545,205	5,277,413	10,822,618	319,409	29.51	119,505	106,378	225,883

in the districts of Burma during the year 1923. (Paragraph 10.)

8	9											10			11
Number of deaths of males to every hundred deaths of females.	DEATHS PER THOUSAND OF POPULATION FROM											MEAN RATIO OF DEATHS PER THOUSAND DURING PREVIOUS FIVE YEARS.			Serial No.
	Cholera.	Small-pox.	Plague.	Fevers.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	All causes.			Male.	Female.	Total.	
									Male.	Female.	Total.				
112	·00	·36	...	11·81	·75	·70	·17	3·23	16·77	17·30	17·01	26·59	26·98	26·76	1
108	...	...	...	7·55	·42	·10	·32	6·98	16·53	14·29	15·37	21·96	20·53	21·22	2
101	...	·09	...	10·24	·39	·21	·29	9·12	20·76	19·96	20·35	31·74	28·37	30·05	3
180	·14	1·06	3·39	1·84	2·45	8·83	·72	16·43	32·38	40·41	34·85	40·23	49·94	43·16	4
119	·07	·12	·23	8·21	·29	·56	·62	10·41	20·86	20·10	20·51	26·83	27·21	27·01	5
125	·13	·06	·09	4·91	·66	·78	·43	11·99	19·17	18·90	19·05	25·73	26·63	26·13	6
108	·03	·03	·78	8·99	·63	·97	·55	8·27	21·01	19·53	20·27	29·95	28·26	29·11	7
120	·04	·36	·22	5·18	·25	·24	·38	14·12	21·49	20·04	20·81	28·58	27·61	28·12	8
108	·03	·32	1·84	9·25	·51	1·39	·48	9·29	24·43	21·81	23·10	31·64	30·25	30·93	9
117	·07	·04	·19	7·95	·42	·48	·18	7·44	17·49	15·99	16·76	31·08	28·31	29·75	10
106	·07	·56	·54	10·92	·32	·30	·26	10·07	24·19	21·96	23·05	30·41	29·19	29·79	11
117	·01	·00	·73	5·07	·50	·67	·24	9·40	17·38	15·83	16·63	25·93	23·21	24·61	12
107	·08	·11	·54	6·80	·53	·74	·34	10·87	20·81	19·20	20·00	29·75	30·61	30·18	13
123	·34	·11	·15	4·85	·88	·55	·35	11·37	19·29	17·83	18·60	29·00	28·60	28·81	14
112	·62	·32	·42	3·57	·87	1·05	·61	10·92	19·07	17·69	18·39	21·08	23·21	23·65	15
137	1·00	·27	·49	5·64	·78	·66	·59	7·16	17·66	15·32	16·59	24·03	24·20	24·10	16
112	·05	·01	·20	6·80	1·05	·63	·24	7·54	16·75	16·28	16·53	22·23	22·99	22·60	17
124	·08	·02	·23	3·41	·83	1·23	·41	9·60	16·43	15·23	15·87	23·99	23·86	23·93	18
107	·08	·01	...	17·59	1·03	·67	·18	5·10	24·61	24·62	24·61	30·84	28·76	29·82	19
125	·03	·10	...	10·09	1·30	·92	·25	6·61	19·95	18·55	19·30	27·55	24·21	25·99	20
101	·06	·25	·17	9·07	·62	·37	·36	10·11	21·94	20·13	21·00	27·86	26·63	27·22	21
102	·02	·04	·56	7·27	·13	·60	·38	11·95	22·45	19·60	20·94	34·38	31·10	32·65	22
100	·18	·05	1·71	7·17	·93	1·18	·50	9·14	21·98	19·84	20·86	24·54	22·55	23·49	23
92	·00	05	1·24	9·14	·18	·36	·48	11·35	23·98	21·82	22·80	26·62	23·12	24·69	24
107	·82	·14	2·79	9·57	1·31	3·94	·31	18·58	37·73	37·16	37·45	41·95	42·21	43·59	25
99	·37	...	·80	12·74	·07	·24	·24	19·13	33·80	33·39	33·59	41·71	39·62	40·65	26
108	·01	·21	3·18	4·03	·12	·15	·32	10·62	20·37	17·08	18·64	26·34	22·69	24·44	27
107	·04	·02	1·31	8·52	·28	·79	·40	16·17	28·56	26·57	27·56	27·94	26·94	27·44	28
97	·08	·15	·00	3·61	·23	·28	·37	11·80	16·85	16·53	16·53	23·65	21·77	22·67	29
106	·04	1·29	·06	5·90	·12	·26	·44	11·02	19·71	18·59	19·15	23·41	21·93	22·67	30
106	·13	1·98	...	10·39	·38	·61	·55	12·70	23·62	25·93	27·25	30·32	28·27	29·29	31
112	·14	·26	·70	7·27	·62	1·00	·99	10·49	21·55	20·16	20·87	28·56	27·26	27·93	

SUPPLEMENTARY ANNUAL STATEMENT II(a)—*Showing births*
(I—XII) *for*

I Areas.	2 Area in square miles.	3 Average popula- tion per square mile.	4 Population according to census of 1921.		
			Male.	Female.	Total.
Pyinwa Circle of Akyab District	80	29.88	1,247	1,143	2,390
Hill District of Arakan ...	1,500	13.94	10,790	10,124	20,914
Salween District ...	2,666	18.90	26,811	23,568	50,379
Papun Town ...	...	...	901	513	1,414
Pakòkku Hill Tracts ...	3,100	6.47	9,840	10,203	20,043
Katha District ...	7,721	30.27	118,103	115,603	233,706
Katha Town ...	...	...	2,583	1,870	4,453
Upper Chindwin District ...	14,525	12.25	90,182	87,701	177,883
Mawlaik Town ...	...	...	1,672	743	2,415
Chin Hills District ...	8,000	13.76	54,122	55,957	110,079
Myitkyina District ...	11,847	11.68	73,760	64,641	138,401
Myitkyina Town ...	...	...	3,107	1,849	4,956
Bhamo District ...	6,903	16.36	56,888	56,072	112,960
Bhamo Town ...	...	...	4,933	2,808	7,741
Lashio Town ...	...	...	2,046	1,402	3,448
Southern Shan States ...	40,437	22.54	458,193	453,275	911,468
Loilem Town ...	...	...	552	446	998
Kalaw Town ...	...	...	1,822	1,175	2,997
Total ...	96,779	18.37	899,936	878,287	1,778,223

and deaths in Areas not included in the main statements
the year 1923. (Paragraph 7.)

5			6	7			8	Remarks.
Number of births registered.			Birth-rate per 1,000 of population.	Number of deaths registered.			Death-rate per 1,000 of population.	
Male.	Female.	Total.		Male.	Female.	Total.		
13	18	31	12'07	26	26	52	21'76	
97	79	176	8'42	140	94	234	11'19	
254	230	484	9'61	330	268	598	11'87	
7	6	13	9'19	11	11	22	15'56	
345	360	705	35'17	567	547	1,114	55'58	
1,723	1,650	3,373	14'43	1,511	1,375	2,886	12'35	
55	49	104	23'36	103	88	191	42'89	
2,031	1,924	3,955	22'23	1,695	1,628	3,323	18'68	
13	19	32	13'25	30	15	45	18'63	
1,823	1,802	3,625	32'93	1,581	1,457	3,038	27'40	
655	648	1,303	9'41	1,210	929	2,139	15'46	
91	79	170	34'30	173	83	256	51'65	
1,385	1,339	2,724	24'11	1,556	1,218	2,774	24'56	
86	82	168	21'70	170	69	239	30'87	
73	55	128	37'12	128	48	176	51'04	
2,111	2,078	4,189	4'60	2,795	2,797	5,592	6'14	
19	13	32	32'06	17	14	31	31'06	
45	41	86	28'70	61	32	93	31'03	
10,437	10,128	20,565	11'56	11,411	10,339	21,750	12'23	

ANNUAL STATEMENT NO. III.—Deaths registered in the

1	2								
No.	Division and District.				January.	February.	March.	April.	May.
ARAKAN DIVISION.									
2	Akyab	...	...	...	1,198	696	611	553	707
3	Kyaukpyn	...	...	...	307	289	192	362	195
	Sandoway	...	...	...	255	198	136	158	147
RANGOON DIVISION.									
4	Rangoon	...	...	...	979	952	1,344	1,058	950
5	Insein	...	...	...	608	502	530	467	424
6	Hanthawaddy	...	...	...	727	566	432	634	576
PEGU DIVISION.									
7	Tharrawaddy	...	...	...	1,375	906	784	571	582
8	Pegu	...	...	...	769	693	639	696	735
9	Prome	...	...	...	1,135	759	585	571	560
10	Toungoo	...	...	...	718	544	562	494	448
11	Thayetmyo	...	...	...	573	517	521	433	369
IRRAWADDY DIVISION.									
12	Bassein	...	...	...	681	598	480	546	546
13	Henzada	...	...	...	1,110	781	883	605	608
14	Myaungmya	...	...	...	554	469	459	569	613
15	Ma-ubin	...	...	...	540	471	556	464	413
16	Pyapôn	...	...	...	357	323	521	579	519
TENASSERIM DIVISION.									
17	Thatôn	...	...	...	614	565	580	505	479
18	Amherst	...	...	...	559	473	504	583	519
19	Tavoy	...	...	...	386	354	251	258	263
20	Mergui	...	...	...	174	211	150	203	197
NORTH-WEST BORDER DIVISION.									
21	Pakôkku	...	...	...	965	745	763	800	771
22	Shwebo	...	...	...	919	692	663	583	545
23	Sagaing	...	...	...	719	681	580	493	468
24	Lower Chindwin	...	...	...	826	832	566	856	694
MANDALAY DIVISION.									
25	Mandalay	...	...	...	1,200	1,035	1,080	837	851
26	Kyaukse	...	...	...	508	325	358	271	335
27	Meiktila	...	...	...	1,069	760	480	307	342
28	Yamèthin	...	...	...	894	1,058	761	508	533
29	Myingyan	...	...	...	585	468	662	819	671
30	Magwe	...	...	...	853	750	1,002	588	912
31	Minbu	...	...	...	809	455	567	641	788
TOTAL, BURMA					22,966	18,613	18,207	16,953	16,805
Ratio of deaths per 1,000 in each month					2.12	1.72	1.68	1.57	1.55

districts of Burma during each month of the year 1923.

8							4	5
June.	July.	August.	September.	October.	November.	December.	Total deaths registered during the year.	No.
658 188 171	982 217 156	1,269 346 269	1,254 254 228	465 143 237	570 326 139	803 308 178	9,766 3,072 2,280	1 2 3
1,182 575 622	1,025 574 653	997 545 742	955 415 525	842 540 484	756 374 458	880 456 526	11,918 6,010 6,945	4 5 6
761 974 723 519 512	901 829 790 579 605	949 852 825 564 683	892 794 623 808 327	785 643 611 380 374	711 821 618 350 490	765 827 779 495 484	9,982 9,272 8,582 6,402 5,888	7 8 9 10 11
849 949 578 577 574	780 1,019 535 597 423	891 1,268 667 572 381	762 1,015 591 438 210	790 850 719 588 312	666 962 531 409 296	552 968 609 448 298	8,141 11,018 6,894 6,071 4,793	12 13 14 15 16
631 644 268 197	775 670 263 222	749 614 376 173	683 538 885 279	551 557 277 228	436 535 276 293	1,217 532 897 288	7,785 6,633 3,859 2,615	17 18 19 20
841 661 499 297	816 737 501 449	876 675 348 497	772 576 461 726	991 666 601 917	700 666 614 421	738 811 853 738	9,783 8,194 6,818 7,819	21 22 23 24
899 372 918 623 557 806 757	813 359 364 739 705 665 670	923 267 491 670 709 572 611	885 255 439 493 509 377 400	1,053 388 216 783 470 236 267	1,472 489 159 658 492 449 604	2,308 816 459 1,193 658 895 910	13,356 4,793 5,404 8,906 7,305 8,105 7,474	25 26 27 28 29 30 31
18,768	19,418	20,371	17,880	16,972	16,741	22,189	225,833	
1.73	1.79	1.88	1.65	1.57	1.55	2.05	20.87	

ANNUAL STATEMENT NO. IV.—Deaths registered according to

1	2	3		4		5		6	
No.	Divlision and District.	UNDER ONE YEAR.		ONE YEAR AND UNDER 5.		5 AND UNDER 10.		10 AND UNDER 15.	
		Males.	Females	Males.	Females	Males.	Females	Males.	Females
ARAKAN DIVISION.									
1	Akyab	1,185	1,097	683	675	382	367	165	173
2	Kyaukpyu	372	299	176	167	69	82	48	49
3	Sandoway	459	390	123	128	64	66	20	39
RANGOON DIVISION.									
4	Rangoon	1,139	953	449	409	181	188	253	188
5	Insein	858	681	316	319	137	127	102	86
6	Hanthawaddy	968	731	421	407	152	160	90	75
PEGU DIVISION.									
7	Tharrawaddy	1,611	1,454	541	602	238	264	202	182
8	Pegu	1,605	1,207	503	528	231	282	186	199
9	Prome	1,339	1,148	451	441	278	259	195	173
10	Toungoo	822	689	382	364	184	180	159	113
11	Thayetmyo	862	730	473	443	175	179	82	100
IRRAWADDY DIVISION.									
12	Bassein	1,240	1,000	437	416	167	148	141	135
13	Henzada	1,783	1,456	610	600	308	296	181	151
14	Myaungmya	952	819	541	483	180	167	122	88
15	Ma-ubin	785	616	357	398	154	167	142	150
16	Pyapôn	573	423	328	286	198	170	163	88
TENASSERIM DIVISION.									
17	Thatôn	1,082	700	536	495	230	226	152	129
18	Amherst	807	592	426	398	156	187	116	121
19	Tavoy	472	324	293	294	131	119	56	53
20	Mergui	294	227	226	201	88	77	43	24
NORTH WEST BORDER DIVISION.									
21	Pakôkku	1,554	1,338	995	995	225	245	126	121
22	Shwebo	1,472	1,311	318	329	219	205	128	109
23	Sagaing	781	686	403	371	166	170	120	116
24	Lower Chindwin	956	854	554	587	213	205	164	145
MANDALAY DIVISION.									
25	Mandalay	2,137	1,841	634	689	312	360	237	213
26	Kyaukse	688	610	269	281	123	144	82	74
27	Meiktila	723	579	263	300	115	109	113	109
28	Yamèthin	1,581	1,289	612	526	242	271	173	170
29	Myingyan	961	871	491	479	160	170	134	123
30	Magwe	966	916	589	571	199	187	185	151
31	Minbu	1,039	923	536	525	178	166	106	118
TOTAL, DEATHS		32,046	26,753	13,916	13,707	5,852	5,893	4,190	3,751
TOTAL, POPULATION		181,269	136,391	534,383	554,521	665,315	673,733	648,260	609,818
TOTAL, RATIO PER 1,000 LIVING.		244.12	196.15	26.04	24.72	8.80	8.75	6.46	6.15

Age in the Districts of Burma during the year 1923.

7		8		9		10		11		12		1
15 AND UNDER 20.		20 AND UNDER 30.		30 AND UNDER 40		40 AND UNDER 50.		50 AND UNDER 60.		60 AND UPWARDS.		No.
Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females	Males.	Females.	
214	211	434	584	484	372	432	290	423	246	767	583	1
48	59	100	140	125	123	112	94	148	111	368	358	2
82	43	56	82	58	78	66	63	91	76	179	173	3
412	224	1,390	595	1,419	518	935	316	610	262	868	603	4
145	138	357	290	313	283	292	177	262	177	499	462	5
130	109	331	309	348	308	366	229	303	215	745	548	6
247	180	464	449	446	394	424	365	327	308	644	610	7
230	211	463	439	480	390	435	288	332	186	537	485	8
178	170	417	389	412	363	358	312	320	323	517	539	9
174	164	343	320	419	283	361	235	231	221	379	379	10
98	101	185	220	219	214	209	177	223	212	510	481	11
152	164	446	391	491	381	395	303	305	285	622	523	12
227	233	409	431	430	467	459	410	417	396	876	833	13
158	159	352	303	356	280	319	232	309	190	497	397	14
191	163	357	348	295	284	264	194	198	149	470	389	15
156	125	290	227	301	204	248	160	209	128	301	215	16
152	185	269	403	371	402	371	302	320	311	637	512	17
141	147	337	356	358	287	330	219	277	202	723	504	18
61	68	137	168	183	179	161	137	151	153	348	371	19
54	40	125	115	132	108	146	85	121	103	225	181	20
141	155	306	316	251	285	282	230	269	253	765	931	21
167	176	279	321	213	231	247	215	289	256	814	895	22
160	171	318	344	281	268	224	202	248	264	713	818	23
167	177	264	283	272	243	212	234	215	271	740	1,063	24
282	269	631	592	645	510	571	430	527	508	909	1,039	25
68	84	169	213	164	170	198	142	183	185	432	509	26
172	156	270	262	223	220	211	169	206	196	506	502	27
184	187	311	371	319	313	293	261	230	240	650	683	28
161	183	268	324	269	296	262	272	236	268	652	725	29
271	221	451	363	347	311	278	247	232	198	654	768	30
170	158	396	448	334	292	290	245	254	188	546	562	31
5,138	4,811	10,960	10,446	10,958	9,057	9,791	7,235	8,511	7,081	18,143	17,644	
543,201	566,316	986,827	926,484	805,282	653,264	570,043	499,720	347,411	344,624	313,209	312,542	
9.46	8.50	11.11	11.27	13.61	13.86	17.18	14.48	24.50	20.55	57.93	56.45	

SUPPLEMENTARY ANNUAL STATEMENT NO. IV-(a) *giving the*

No.	Division and District.	NOT EXCEEDING ONE MONTH.						
		MALE.			FEMALE.			
		Under one week.	Over one week.	Total.	Under one week.	Over one week.	Total.	Total of columns 5 and 8.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ARAKAN DIVISION.								
1	Akyab	109	124	233	114	120	234	467
2	Kyaukpypu	57	96	153	44	72	116	269
3	Sandoway	76	79	155	69	59	128	283
RANGOON DIVISION.								
4	Rangoon	364	117	481	292	120	422	903
5	Insein	105	145	250	85	121	206	456
6	Hanthawaddy	157	149	306	114	102	216	522
PEGU DIVISION.								
7	Tharrawaddy	122	173	295	107	152	259	554
8	Pegu	302	346	648	208	270	478	1,126
9	Prome	114	166	280	95	127	222	502
10	Toungoo	98	148	246	61	101	162	408
11	Thayetmyo	131	170	301	115	151	266	567
IRRAWADDY DIVISION.								
12	Bassein	178	169	347	132	122	254	601
13	Henzada	199	242	441	152	180	332	773
14	Myaungmya	158	159	317	140	124	264	581
15	Ma-ubin	110	118	228	63	97	160	398
16	Pyapôn	81	131	215	55	71	126	341
TENASSERIM DIVISION.								
17	Thatôn	138	172	310	75	102	177	487
18	Amherst	117	144	261	109	93	202	463
19	Tavoy	56	55	111	30	40	70	181
20	Mergui	38	46	84	34	33	72	156
NORTH-WEST BORDER DIVISION.								
21	Pakôkku	383	280	663	275	216	491	1,154
22	Shwebo	303	238	541	247	202	449	990
23	Sagaing	158	196	354	137	146	283	637
24	Lower Chindwin	164	177	341	157	142	299	640
MANDALAY DIVISION.								
25	Mandalay	628	341	969	460	300	760	1,729
26	Kyaukse	209	133	342	162	118	280	622
27	Meiktila	95	77	172	71	77	148	320
28	Yamèthin	131	166	317	98	133	231	548
29	Myingyan	214	237	451	171	204	375	826
30	Magwe	105	170	275	91	151	242	517
31	Minbu	153	165	318	102	135	237	555
Total ...		5,256	5,149	10,405	4,065	4,096	8,161	18,566

Details of Deaths by Ages under One Year during the year 1923.

OVER ONE MONTH AND NOT EXCEEDING SIX MONTHS.			OVER SIX MONTHS AND NOT EXCEEDING TWELVE MONTHS.			Total males, columns 5, 10 and 13.	Total females, columns 8, 11 and 14.	Total.	No.
Male.	Female.	Total.	Male.	Female.	Total.				
(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
428	369	797	524	494	1,018	1,185	1,097	2,282	1
153	126	279	66	57	123	372	299	671	2
257	220	477	47	42	89	459	390	849	3
460	397	857	193	134	327	1,139	953	2,092	4
424	329	753	184	145	329	858	680	1,538	5
507	379	880	155	142	297	968	731	1,699	6
1,087	966	2,053	259	229	488	1,641	1,454	3,095	7
650	513	1,163	307	216	523	1,805	1,207	3,012	8
852	752	1,604	207	174	381	1,339	1,148	2,487	9
407	369	776	169	158	327	822	689	1,511	10
342	291	633	219	173	392	862	730	1,592	11
682	562	1,244	211	184	395	1,240	1,000	2,240	12
1,029	848	1,877	313	276	589	1,783	1,456	3,239	13
469	392	861	166	163	329	952	819	1,771	14
386	309	695	171	147	318	785	616	1,401	15
236	184	420	122	113	235	573	423	996	16
493	333	826	279	190	469	1,082	700	1,782	17
395	268	663	151	122	273	807	592	1,399	18
272	186	458	89	68	157	472	324	796	19
134	100	234	76	55	131	294	227	521	20
621	568	1,189	270	279	549	1,554	1,338	2,892	21
749	679	1,428	182	183	365	1,472	1,311	2,783	22
282	273	555	145	130	275	781	686	1,467	23
393	356	749	222	199	421	956	854	1,810	24
901	801	1,702	267	280	547	2,137	1,841	3,978	25
251	243	494	95	87	182	688	610	1,298	26
412	312	724	139	119	258	723	579	1,302	27
967	806	1,773	247	252	499	1,531	1,289	2,820	28
268	264	532	242	232	474	961	871	1,832	29
439	418	857	252	256	508	966	916	1,882	30
521	495	1,016	200	191	391	1,039	928	1,962	31
15,467	13,102	28,569	6,174	5,490	11,664	32,046	26,753	58,799	

ANNUAL STATEMENT NO. V.—Deaths registered according

1	2		3					
			POPULATION (CENSUS 1921).					
			Christians	Mahomedans.	Hindus.	Burmese or Buddhists.	Other classes.	Total.
No.	Divisions and Districts.							
	ARAKAN DIVISION.							
1	Akyab	...	618	203,961	14,719	315,137	34,605	574,040
2	Kyaukpyu	...	186	4,479	634	178,451	16,173	199,879
8	Sandoway	...	956	5,251	376	100,878	4,568	112,029
	RANGOON DIVISION.							
4	Rangoon	...	25,275	61,954	125,002	111,571	18,160	341,962
5	Insein	...	15,579	7,990	24,658	241,481	3,375	293,083
6	Hanthawaddy	...	5,074	12,811	47,326	293,768	5,645	364,624
	PEGU DIVISION.							
7	Tharrawaddy	...	8,074	5,421	9,179	467,558	2,197	492,429
8	Pegu	...	9,790	9,745	40,856	378,338	6,891	445,620
9	Prome	...	1,238	4,174	5,509	858,283	4,371	371,575
10	Toungoo	...	35,442	8,163	19,575	297,980	20,723	381,883
11	Thayetmyo	...	465	1,994	1,946	239,726	11,275	255,406
	IRRAWADDY DIVISION.							
12	Bassein	...	32,630	9,994	14,947	428,546	3,356	489,473
13	Henzada	...	11,742	5,211	6,703	525,231	2,033	550,920
14	Myaungmya	...	21,198	11,451	9,533	324,315	4,054	370,551
15	Maubin	...	11,984	6,001	6,833	302,862	2,428	330,106
16	Pyapön	...	9,054	5,640	16,431	254,072	3,797	288,994
	TENASSERIM DIVISION.							
17	Thatön	...	3,811	13,405	21,112	430,329	2,443	471,100
18	Amherst	...	7,074	26,678	25,415	355,175	3,568	417,910
19	Tavoy	...	2,645	2,873	3,319	145,146	2,803	156,786
20	Mergui	...	6,153	11,645	6,613	104,617	6,437	135,465
	NORTH-WEST BORDER DIVISION.							
21	Pakökku	...	907	1,022	842	460,158	3,442	465,771
22	Shwebo	...	2,008	7,610	2,538	378,464	664	391,284
23	Sagaing	...	948	2,811	1,956	321,016	177	326,908
24	Lower Chindwin	...	334	1,025	1,299	340,065	157	342,880
	MANDALAY DIVISION.							
25	Mandalay	...	8,329	23,209	22,061	299,327	3,695	356,621
26	Kyaukse	...	592	5,740	1,028	135,082	235	142,677
27	Meiktila	...	772	4,283	2,644	281,618	580	289,897
28	Yamèthin	...	2,416	12,908	6,220	298,565	3,080	323,189
29	Myingyan	...	343	1,156	1,724	438,374	412	442,008
30	Magwe	...	1,153	3,521	7,243	410,548	787	423,252
31	Minbu	...	174	1,223	1,995	265,885	5,025	274,302
	TOTAL		226,313	488,349	450,236	9,480,566	177,151	10,822,618

to classes in the districts of Burma during the year 1923.

4						5						6
NUMBER OF DEATHS REGISTERED.						RATIO OF DEATHS PER 1,000 OF POPULATION.						No.
Christians.	Mahom- edans.	Hindus.	Burmese or Buddhists.	Other classes.	Total.	Christians.	Mahom- edans.	Hindus.	Burmese or Buddhists.	Other classes.	Total.	
4	3,129	132	5,895	608	9,766	6.47	14.98	8.97	18.71	17.51	17.01	1
8	63	6	2,748	247	3,072	58.82	14.07	9.46	15.40	15.27	15.37	2
18	98	4	2,025	135	2,280	18.83	18.66	10.64	20.07	29.55	20.35	3
624	1,883	4,536	4,831	44	11,918	24.69	30.39	36.29	43.30	2.42	34.65	4
262	99	253	5,174	222	6,010	16.32	12.39	10.26	21.43	65.78	20.51	5
57	190	442	5,741	515	6,945	11.23	14.83	9.34	19.54	91.23	19.05	6
54	110	244	9,497	77	9,982	6.69	20.29	26.58	20.31	35.05	20.27	7
94	122	428	8,222	406	9,272	9.60	12.52	10.48	21.73	58.92	20.81	8
7	110	280	8,085	100	8,582	5.65	26.35	50.83	22.70	22.88	23.10	9
269	139	193	5,614	187	6,402	7.59	17.03	9.86	13.84	9.02	16.76	10
5	64	36	5,560	223	5,838	10.75	33.10	18.50	23.19	19.78	23.05	11
325	217	349	7,215	35	8,141	9.96	21.71	23.35	16.83	10.43	16.63	12
133	107	146	10,545	87	11,018	11.33	20.53	21.78	20.06	42.79	20.00	13
320	176	154	6,081	163	6,894	15.09	15.37	16.15	18.75	41.21	18.60	14
153	177	199	5,445	97	6,071	12.77	29.50	29.12	17.98	39.98	18.89	15
98	103	211	4,055	326	4,793	10.82	18.26	12.84	15.96	85.86	16.59	16
65	212	224	6,914	370	7,785	17.06	15.81	10.61	16.07	151.45	16.53	17
98	535	628	5,232	140	6,633	13.85	20.05	24.71	14.73	39.24	15.87	18
56	70	53	3,569	111	3,859	21.17	24.36	15.97	24.59	39.60	24.61	19
91	207	54	2,186	77	2,615	14.79	17.78	8.17	20.90	11.96	19.30	20
1	8	3	9,623	148	9,783	3.26	7.83	3.56	20.91	43.00	21.00	21
24	106	42	8,001	21	8,194	11.95	13.93	16.55	21.14	31.63	20.94	22
11	44	37	6,718	8	6,818	11.60	15.65	18.92	20.93	45.20	20.86	23
4	14	9	7,788	4	7,819	11.98	13.66	6.93	22.90	25.48	22.80	24
186	807	682	11,528	153	13,356	22.33	34.77	30.91	38.51	41.41	37.45	25
2	74	2	4,711	4	4,793	3.38	12.89	1.95	34.88	17.02	33.59	26
5	91	36	5,263	9	5,404	6.48	21.25	13.62	18.69	15.52	18.64	27
14	402	141	8,260	89	8,906	5.79	31.14	22.67	27.67	28.90	27.56	28
1	22	9	7,271	2	7,305	2.92	19.03	5.22	16.59	4.85	16.53	29
7	32	68	7,974	24	8,105	6.07	9.09	9.39	19.42	20.50	19.15	30
5	21	19	7,292	137	7,474	28.73	17.17	9.52	27.42	27.26	27.25	31
3,011	9,432	9,620	199,063	4,767	225,883	13.26	19.31	21.37	21.00	26.91	20.87	

SUPPLEMENTARY ANNUAL STATEMENT NO. V-(a).—Deaths registered during the

1	2	3									
No.	Divisions and Districts.	Population (Census 1921).									
		Christians.		Mahomedans.		Hindus.		Burmese or Buddhists.		Christians.	
		Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.
ARAKAN DIVISION.											
1	Akyab ...	428	190	116,736	52,225	13,401	1,318	159,719	155,418	3	1
2	Kyaukpau ...	65	71	2,580	1,899	609	25	84,901	93,550	4	4
3	Sandoway ...	488	468	2,749	2,502	331	45	49,415	51,463	9	9
RANGOON DIVISION.											
4	Rangoon ...	14,208	11,067	49,520	12,434	102,313	22,689	58,088	53,483	353	271
5	Insein ...	7,688	7,891	5,391	2,599	18,872	5,786	122,368	119,113	128	134
6	Hanthawaddy ...	3,022	2,052	9,551	3,260	35,365	11,961	148,757	145,011	30	27
PEGU DIVISION.											
7	Tharrawaddy ...	3,970	4,104	3,736	1,685	7,422	1,757	229,477	238,081	26	28
8	Pegu ...	4,918	4,872	6,996	2,749	27,554	13,302	191,186	187,152	51	43
9	Prome ...	651	587	2,687	1,487	4,427	1,082	172,327	183,956	3	4
10	Toungoo ...	17,624	17,818	5,498	2,665	13,316	6,259	149,783	148,197	152	117
11	Thayetmyo ...	261	204	1,177	817	1,405	541	116,712	123,014	4	1
IRRAWADDY DIVISION.											
12	Bassein ...	16,207	16,423	7,082	2,912	13,151	1,796	213,811	214,735	172	153
13	Henzada ...	5,711	6,031	3,323	1,283	5,712	991	257,097	268,204	77	56
14	Myaungmya ...	10,645	10,553	8,990	2,461	8,544	989	165,260	159,055	163	157
15	Maubin ...	5,976	6,008	4,350	1,651	5,954	879	150,413	152,449	81	72
16	Pyapôn ...	4,925	4,129	4,843	797	12,804	3,627	131,225	122,847	53	45
TENASSERIM DIVISION.											
17	Thatôn ...	1,920	1,891	8,912	4,493	14,794	6,318	218,580	174,749	29	36
18	Amherst ...	3,596	3,478	16,261	10,417	19,468	5,947	181,489	173,686	48	50
19	Tavoy ...	1,371	1,274	1,844	1,029	2,953	366	72,612	72,534	35	21
20	Mergui ...	3,297	2,856	6,270	5,375	5,842	771	53,200	51,417	55	36
NORTH-WEST BORDER DIVISION.											
21	Pakôkku ...	210	97	701	321	702	140	220,495	239,663	1	...
22	Shwebo ...	1,015	993	3,922	3,338	1,925	613	177,347	201,117	13	11
23	Sagaing ...	446	602	1,563	1,248	1,382	574	151,524	169,492	8	9
24	Lower Chindwin ...	194	140	794	231	1,006	293	154,557	185,503	2	2
MANDALAY DIVISION.											
25	Mandalay ...	4,506	3,823	13,665	9,544	15,591	6,470	146,205	153,122	103	83
26	Kyaukse ...	292	300	2,89	2,344	21	207	66,277	68,805	2	...
27	Aieiktila ...	532	240	2,369	1,914	2,005	639	132,184	149,434	2	3
28	Yamèthin ...	1,285	1,131	6,895	6,012	4,797	1,423	146,036	152,479	9	5
29	Myingyan ...	202	140	833	323	1,399	325	210,540	227,834	1	...
30	Magwe ...	746	407	2,748	773	6,669	574	200,865	209,683	2	5
31	Minbu ...	118	56	842	381	1,752	243	129,039	136,846	5	...
Total		116,517	109,796	305,725	182,324	352,286	97,950	4,661,469	4,819,097	1,624	1,377

according to Sex in the four main classes in the Districts of Burma
year 1923.

4						5								6
Number of deaths registered.						Ratio of deaths per 1,000 of population.								No.
Mahomedans.		Hindus.		Burmese or Buddhists.		Christians.		Mahomedans.		Hindus.		Burmese or Buddhists.		
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.	
1,696	1,433	112	20	3,041	2,854	7.01	5.26	14.53	15.53	8.36	15.17	19.04	18.36	1
29	34	4	2	1,432	1,316	61.54	56.34	11.24	17.90	6.57	30.00	16.87	14.07	2
43	55	3	1	1,018	1,007	18.44	19.23	15.64	21.98	9.06	22.22	20.60	19.57	3
1,237	596	3,321	1,215	2,680	2,151	24.85	24.49	25.99	47.93	32.46	53.55	46.14	40.22	4
65	34	175	78	2,750	2,424	16.65	16.98	12.06	13.08	9.27	13.48	22.47	20.35	5
123	68	320	122	3,015	2,726	9.93	13.16	12.77	20.86	9.05	10.20	20.27	18.80	6
77	33	189	55	4,325	4,672	6.55	6.82	20.61	19.58	25.46	31.30	21.03	19.62	7
82	40	328	100	4,313	3,909	10.37	8.83	11.72	14.55	11.90	7.52	22.56	20.89	8
64	46	187	93	4,144	3,941	4.61	6.81	23.82	30.93	42.24	85.95	24.05	21.42	9
78	61	143	50	2,996	2,618	8.62	6.57	14.19	22.89	10.74	7.99	20.00	17.67	10
42	22	25	11	2,838	2,722	15.33	4.90	35.68	26.93	17.79	20.33	24.32	22.13	11
149	68	285	64	3,765	3,450	10.81	9.32	21.04	23.35	21.67	55.63	17.61	16.07	12
68	39	111	35	5,369	5,176	13.43	9.29	20.46	20.66	19.43	35.32	20.89	19.30	13
129	47	135	19	3,244	2,837	15.31	14.88	14.35	19.10	15.80	19.21	19.63	17.84	14
116	61	138	61	2,819	2,626	13.55	11.93	26.67	36.95	23.13	69.40	18.74	17.23	15
81	22	180	31	2,185	1,870	10.76	10.90	16.73	27.60	14.08	8.55	16.65	15.22	16
123	89	146	78	3,632	3,282	15.10	19.04	13.80	19.81	9.87	12.35	16.62	15.50	17
254	181	450	178	2,730	2,502	13.35	14.33	21.77	17.38	23.11	23.93	15.04	14.41	18
44	26	45	8	1,787	1,782	25.53	16.48	23.86	25.27	15.24	21.86	24.61	21.55	19
107	100	45	9	1,178	1,008	16.68	12.61	17.07	18.60	7.70	11.67	22.14	19.60	20
5	3	2	1	4,823	4,795	4.76	...	7.13	9.35	2.85	7.14	21.90	20.01	21
55	51	29	13	4,032	3,969	12.81	11.03	14.02	13.83	15.06	21.21	22.74	19.73	22
23	16	24	13	3,345	3,373	17.94	5.93	17.91	12.82	17.37	22.65	22.08	19.90	23
7	7	6	3	3,739	4,049	10.31	14.29	8.82	30.36	6.96	10.24	24.19	21.83	24
445	362	447	235	5,801	5,727	23.86	21.71	32.56	37.93	23.67	36.32	39.67	37.40	25
48	26	2	...	2,326	2,335	6.85	...	16.57	9.14	2.44	...	35.10	34.66	26
47	44	27	9	2,718	2,545	3.76	12.50	19.84	22.99	13.47	14.03	20.56	17.03	27
219	183	102	39	4,204	4,056	7.00	4.42	31.76	30.44	21.26	27.41	28.78	26.60	28
13	4	7	2	3,568	3,703	4.95	...	21.61	12.33	5.00	6.15	16.95	16.25	29
22	10	56	12	4,076	3,898	2.63	12.29	8.01	12.94	8.40	20.91	20.29	18.59	30
20	1	14	5	3,740	3,552	42.37	...	23.75	2.62	7.99	20.53	23.93	25.96	31
5,670	3,762	7,053	2,562	102,138	96,925	13.94	12.54	18.55	20.60	20.03	26.16	21.91	20.11	

ANNUAL STATEMENT NO. VI-A.—*Births and Deaths registered from*
year 1923. (Paragraphs

1	2	3	4				5	6	7	8	9	10
No.	Division and Districts (excluding towns)	Popula- tion (Census 1921).	BIRTHS.			Birth rate.	Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
			Male.	Female.	Total.							
ARAKAN DIVISION.												
1	Akyab ...	535,148	6,997	6,458	13,455	25.14	1	192	...	6,538	399	300
2	Kyaukpau ...	195,989	2,153	1,999	4,152	21.19	...	...	...	1,472	81	14
3	Sandoway ...	108,267	2,040	1,909	3,949	36.47	...	10	...	1,106	43	21
RANGOON DIVISION.												
4	Insein ...	278,775	4,716	4,282	8,998	32.28	18	35	46	2,327	67	57
5	Hanthawaddy ...	341,278	5,381	4,903	10,284	30.13	46	23	31	1,691	197	191
Pegu DIVISION.												
6	Tharrawaddy ...	449,000	7,216	6,840	14,056	31.31	5	16	45	4,186	249	306
7	Pegu ...	419,355	5,748	5,397	11,145	26.58	19	121	21	2,091	61	4
8	Prome ...	322,246	5,109	4,661	9,770	30.32	5	69	53	3,220	93	68
9	Toungoo ...	350,117	4,147	3,960	8,107	23.16	18	3	26	2,854	46	3
10	Thayetmyo ...	233,419	3,581	3,226	6,807	29.16	16	121	62	2,606	50	21
IRRAWADDY DIVISION.												
11	Bassein ...	434,904	5,368	4,962	10,330	23.75	3	1	122	2,372	164	42
12	Henzada ...	512,412	8,971	8,474	17,445	34.04	33	40	41	3,609	219	131
13	Myaungmya ...	349,709	5,123	4,958	10,031	28.83	61	9	24	1,665	236	59
14	Ma-ubin ...	305,938	4,879	4,623	9,502	31.06	188	59	39	1,089	224	262
15	Pyapön ...	272,111	3,102	2,905	6,007	22.08	150	67	67	1,502	172	93
TANASSERIM DIVISION.												
16	Thatön ...	448,841	6,477	6,076	12,553	27.97	25	6	39	3,089	422	214
17	Amherst ...	350,022	5,006	4,562	9,568	27.34	31	5	49	1,263	148	186
18	Tavoy ...	129,306	2,594	2,328	4,922	38.06	3	2	...	2,408	115	82
19	Mergui ...	118,168	1,973	1,764	3,737	31.62	4	14	...	1,178	138	26
NORTH-WEST BORDER DIVISION.												
20	Pakōkku ...	446,234	8,393	8,194	16,587	37.16	29	109	77	4,185	287	90
21	Shwebo ...	377,937	6,806	6,496	13,302	35.19	7	12	93	2,784	46	106
22	Sagaing ...	315,050	4,422	4,475	8,897	28.23	58	17	463	2,226	294	369
23	Lower Chindwin ...	323,655	6,325	6,311	12,636	37.87	...	15	413	3,090	55	27
MANDALAY DIVISION.												
24	Mandalay ..	187,707	3,373	3,131	6,509	34.68	147	...	114	2,563	20	83
25	Kyaukse ...	136,570	2,716	2,488	5,204	38.10	51	...	113	1,780	2	2
26	Meiktila ...	281,029	3,481	3,512	6,993	24.88	4	61	829	1,186	28	33
27	Yamethin ...	294,730	5,682	5,494	11,176	37.92	12	3	141	2,620	33	22
28	Myingyan ...	415,933	6,135	6,157	12,292	29.55	31	64	...	1,427	87	54
29	Magwe ...	399,612	5,402	4,927	10,329	25.84	13	379	4	2,344	16	11
30	Minbu ...	262,065	4,194	4,196	8,390	32.01	35	533	...	2,944	95	68
Total, Rural Dis- tricts, Burma.		9,605,607	147,515	139,668	287,183	29.90	1,018	1,985	2,912	73,465	4,087	2,925

different causes in the Districts (rural areas) of Burma during the 11, 13, 29.)

11						12	13	14											15
INJURIES.						All other causes.	Total deaths from all causes.	RATIO OF DEATHS PER 1,000 OF POPULATION.											No.
Suicide.		Wounding or accident.	Snake bite or killed by wild beasts.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.			
Males.	Females.															For the year.	Mean of previous five years.		
3	4	64	9	4	84	1,434	8,948	00	36	...	12.22	75	56	16	2.68	16.72	26.85	1	
2	2	45	14	...	61	1,361	2,989	...	...	...	7.51	41	07	31	6.94	15.25	21.04	2
...	...	23	5	...	30	983	2,193	...	09	...	10.23	40	19	28	9.08	20.26	30.21	3	
3	1	60	112	5	181	2,953	5,684	07	13	17	8.35	21	20	65	10.59	20.39	27.35	4	
3	1	49	70	10	133	4,175	5,487	13	07	09	4.95	58	56	39	12.23	19.01	25.97	5	
2	1	66	161	11	244	3,513	8,504	01	04	10	9.32	55	63	54	7.82	19.07	27.75	6	
5	1	28	52	17	103	5,713	8,133	05	29	05	4.99	15	01	25	13.62	19.39	26.81	7	
6	7	44	88	6	151	2,660	6,329	02	21	16	10.02	29	21	47	8.25	19.64	27.49	8	
7	1	12	33	5	57	2,463	5,470	05	01	07	8.15	13	01	16	7.03	15.62	28.97	9	
3	3	27	13	2	48	2,064	5,073	07	52	27	11.55	21	09	21	8.84	21.75	28.96	10	
1	...	58	25	2	86	3,643	6,433	01	00	28	5.45	38	10	20	8.38	14.79	21.63	11	
2	...	71	63	5	141	5,425	9,644	07	08	08	7.04	43	26	28	10.59	18.42	29.13	12	
1	2	52	36	9	100	3,869	6,023	17	03	07	4.76	67	17	29	11.06	17.22	27.57	13	
2	1	65	101	8	177	3,249	5,237	61	19	13	3.56	73	86	58	10.62	17.28	22.74	14	
1	...	47	73	88	159	1,819	4,029	55	25	25	5.52	63	34	58	6.08	14.80	22.88	15	
3	2	40	33	24	102	3,169	7,066	06	01	09	6.88	94	43	23	7.06	15.74	21.94	16	
1	...	82	35	4	122	2,647	4,451	09	01	14	3.61	42	53	35	7.56	12.72	21.38	17	
2	...	23	1	...	26	428	3,064	02	02	...	13.62	89	63	90	3.31	23.69	27.63	18	
...	2	15	9	...	26	581	1,967	03	12	...	9.97	1.18	22	22	4.92	16.65	21.56	19	
3	5	63	77	14	162	4,296	9,235	06	24	17	9.38	64	20	36	9.63	20.69	26.74	20	
6	2	45	81	18	147	4,502	7,697	02	03	25	7.37	12	28	39	11.91	20.37	32.30	21	
2	1	41	96	4	144	2,804	6,375	18	05	1.47	7.07	93	1.17	46	8.90	20.23	22.94	22	
8	2	62	64	25	161	3,802	7,563	...	04	1.24	9.26	16	08	48	11.40	22.67	24.32	23	
...	...	15	20	3	38	2,694	5,659	78	...	61	13.85	11	44	20	14.35	20.15	35.16	24	
2	3	8	14	2	29	2,658	4,635	37	...	83	13.03	01	01	21	19.46	33.94	40.78	25	
...	1	27	57	2	87	2,929	5,167	01	22	2.95	4.04	10	12	31	10.42	18.17	23.58	26	
...	1	61	44	10	116	4,845	7,792	04	01	48	8.89	11	07	39	16.44	26.44	26.53	27	
2	2	72	75	5	156	4,824	6,623	07	15	...	3.43	21	08	38	11.60	15.92	21.30	28	
3	8	29	117	8	165	4,202	7,134	03	95	01	5.87	04	03	41	10.52	17.85	21.35	29	
1	...	43	93	3	140	3,263	7,083	13	2.03	...	11.23	36	26	53	12.47	27.02	28.98	30	
74	53	1,337	1,673	239	3,376	92,973	132,741	11	21	30	7.65	43	30	35	9.08	19.02	26.02		

ANNUAL STATEMENT NO. VI-B.—*Births and Deaths registered from different*
18, 19, 20, 21,

1	2	3	4				5	6	7	8	9	10
No.	Divisions and Towns.	Popula- tion (Census 1921).	BIRTHS.				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhœa.	Respiratory diseases.
			Male.	Female.	Total.	Birth rate.						
ARAKAN DIVISION.												
1	Akyab	36,569	345	505	650	17.77	1	3	...	210	24	96
2	Minbya	2,323	33	30	63	27.12	...	10	...	32	5	4
3	Kyaukpyu	3,834	59	49	108	27.81	...	...	...	37	3	6
4	Sandoway	3,762	50	55	105	27.91	...	...	...	41	1	2
RANGOON DIVISION.												
5	Rangoon	341,962	3,153	2,971	6,124	17.91	48	363	1,159	629	838	3,018
6	Insein	14,308	122	98	220	15.38	2	1	22	79	13	107
7	Syriam	15,193	118	79	197	12.97	...	...	...	75	12	69
8	Thongwa	8,153	119	116	235	28.82	...	...	...	25	31	24
PEGU DIVISION.												
9	Tharrawaddy	3,625	49	28	77	21.24	...	...	18	17	5	19
10	Thonzè	6,594	114	93	207	31.39	...	...	133	28	9	76
11	Zigôn	6,916	83	88	176	25.45	...	...	49	20	11	23
12	Letpadan	9,901	78	65	143	14.44	1	...	17	60	6	4
13	Gyobingauk	7,666	107	92	199	25.96	11	...	49	65	16	38
14	Minhla	3,829	54	35	89	23.24	...	...	41	14	16	12
15	Nattalin	4,898	30	25	55	11.23	...	...	34	39	...	...
16	Pegu	18,769	281	278	562	29.94	...	38	62	183	35	53
17	Nyaunglebin	7,496	100	101	201	26.81	...	1	15	31	15	47
18	Prome	26,067	298	302	600	23.02	6	23	465	113	70	200
19	Shwedaung	9,108	111	109	220	24.15	...	...	63	34	5	67
20	Paungdè	14,154	190	206	396	27.98	...	21	103	59	20	181
21	Toungoo	19,332	250	224	474	24.52	8	13	31	87	81	127
22	Shwegyin	5,758	99	67	157	27.27	...	...	8	41	17	17
23	Pyu	6,676	77	73	150	22.47	...	...	7	53	15	37
24	Thayetmyo	10,768	84	83	167	15.51	1	5	1	35	3	6
25	Allanmyo	11,219	138	139	277	24.69	...	17	75	59	30	51
IRRAWADDY DIVISION.												
26	Bassein	42,563	813	534	1,147	26.95	...	...	223	59	63	243
27	Ngathainggyaung	5,122	61	67	128	24.99	2	...	14	12	11	27
28	Kyônpyaw	6,884	70	69	139	2.13	...	...	...	31	6	18
29	Henzada	23,651	392	389	781	33.02	1	3	113	52	32	235
30	Myanaung	7,793	99	91	190	24.33	4	13	64	47	26	31
31	Kyangin	7,064	85	109	194	27.46	...	3	77	36	15	9
32	Myaungmya	6,230	85	87	172	27.39	5	...	30	33	21	55
33	Wakèma	8,447	124	142	266	31.49	35	29	...	71	34	39
34	Mawlamyainggyun	6,115	74	81	158	25.84	26	4	...	27	37	50
35	Ma-ubin	6,812	102	100	202	29.65	4	22	40	51	16	27
36	Yandoon	9,344	132	102	234	25.01	14	21	31	39	34	31
37	Danubyu	8,013	79	93	172	21.47	...	2	29	1	12	28
38	Pyapôn	7,659	97	104	201	26.24	74	1	43	28	24	19
39	Kyaiklat	9,224	87	89	176	19.03	64	10	31	101	23	78
TENASSERIM DIVISION.												
40	Thatôn	15,091	229	201	430	28.49	...	...	1	89	52	57
41	Kyaikto	7,168	94	91	188	26.23	...	...	56	24	19	27
42	Moulmein	61,301	809	745	1,554	25.35	2	5	67	114	193	315
43	Kawkareik	6,537	125	116	241	36.59	...	...	...	50	7	14
44	Tavoy	27,480	438	445	883	32.13	1	...	...	351	46	23
45	Mergui	17,297	256	246	502	29.02	...	...	...	189	38	98

causes in the towns of Burma during the year 1923. (Paragraphs 11, 14, 24 and 29).

11						12	13	14												15
INJURIES.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.												No.
Suicide.		Wounding or accident.	Snake bite or killed by wild beasts.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.				
Males.																For the year.	Mean of previous five years.			
1	..	10	..	..	11	417	732	·03	·03	..	5·74	·66	2·63	·20	11·40	20·84	25·56	1
..	..	1	..	..	1	4	56	..	4·00	..	13·78	2·15	1·72	·43	1·72	24·11	..	2
..	1	2	..	..	2	25	83	..	..	..	9·53	·77	1·54	·51	9·01	21·37	30·78	3
..	..	2	..	..	3	39	87	..	..	..	10·90	·27	·80	·80	10·37	23·13	25·39	4
..	..	243	3	..	246	5,617	11,918	·14	1·06	3·39	1·84	2·45	8·83	·72	16·43	34·85	43·16	5		
4	1	16	..	1	22	97	326	·14	·07	1·54	5·52	1·26	7·48	..	6·78	22·78	21·61	6		
..	..	1	..	1	2	101	275	..	..	..	4·94	·79	4·54	1·45	6·38	18·10	28·09	7
..	..	..	..	..	..	..	183	..	..	..	3·07	3·80	2·94	·25	12·39	22·45	23·98	8
..	..	3	..	..	3	33	95	..	..	4·97	4·69	1·38	5·24	·83	9·10	26·21	..	9
..	..	..	..	..	..	66	312	..	..	20·17	4·25	1·36	11·53	..	10·01	47·32	37·98	10
..	..	5	4	1	10	105	218	..	..	7·09	2·89	1·59	3·33	1·45	15·18	31·52	54·57	11
..	..	1	..	1	2	143	233	·10	..	1·72	6·06	·61	·40	·20	14·44	23·53	33·37	12		
..	..	6	3	..	9	131	319	1·43	..	6·39	8·48	2·09	4·96	1·17	17·09	41·61	47·39	13		
..	..	4	..	..	4	49	136	..	..	10·71	3·66	4·18	3·13	1·04	12·80	35·52	46·57	14
1	..	..	1	..	1	31	105	..	..	6·94	7·96	..	..	·20	6·33	21·44	39·43	15
2	..	38	1	..	40	450	871	..	2·02	3·30	10·02	1·86	3·09	2·18	23·98	46·41	49·63	16		
..	..	26	..	..	28	131	268	..	·13	2·00	4·14	2·00	6·27	3·74	17·48	35·75	45·08	17
..	..	14	2	..	16	538	1,436	·23	1·07	17·84	4·33	2·69	7·67	·61	20·64	55·09	61·14	18		
1	..	..	..	..	..	126	295	..	..	6·92	3·73	·55	7·36	..	13·83	32·39	44·61	19
..	..	4	4	1	10	128	522	..	1·48	7·23	4·17	1·41	12·79	·71	9·04	36·88	45·64	20		
..	..	11	..	..	11	252	610	·41	·67	1·60	4·50	4·19	6·57	·57	13·04	31·55	41·78	21
..	..	1	..	..	1	66	150	..	..	1·39	7·12	2·95	2·95	·17	11·46	26·05	35·32	22
..	..	..	..	..	..	60	172	..	..	1·05	7·94	2·25	5·54	..	8·99	25·76	26·37	23
..	..	11	2	..	13	278	342	·09	·46	·09	3·25	·28	·56	1·21	25·82	31·76	42·90	24		
..	..	5	1	..	6	230	468	..	1·52	6·69	5·26	2·67	4·55	·53	20·50	41·71	33·08	25		
..	..	27	..	..	27	796	1,421	..	..	5·24	1·62	1·48	5·71	·63	18·70	33·39	51·94	26
..	..	3	..	..	3	73	142	·39	..	2·73	2·34	2·15	5·27	·59	14·25	27·72	36·87	27
..	..	..	..	..	..	90	145	..	..	..	4·50	·87	2·61	..	18·07	21·06	35·24	28
..	..	35	..	..	35	323	794	·04	·13	4·78	2·20	1·35	9·94	1·48	13·66	33·57	44·25	29
..	..	11	..	..	11	133	329	·51	1·67	8·21	6·13	3·34	3·98	1·41	17·07	42·22	37·98	30
1	..	3	..	..	3	108	251	..	·42	10·90	5·10	2·12	1·27	·42	15·29	35·53	45·28	31
..	..	3	..	1	5	83	232	·80	..	4·78	5·25	3·34	8·76	·80	13·22	36·94	39·05	32		
..	..	13	..	..	13	182	403	4·14	3·43	..	8·41	4·03	4·62	1·54	21·55	47·71	47·20	33
1	..	10	2	1	13	79	236	4·25	·65	..	4·42	6·05	8·18	2·13	12·92	38·59	71·80	34		
..	..	7	2	..	10	100	270	·59	3·23	5·87	7·49	2·35	3·96	1·47	14·68	39·64	35·06	35		
..	..	7	3	..	11	153	334	1·50	2·25	3·32	4·17	3·64	3·32	1·18	16·37	35·74	35·51	36		
..	..	2	..	..	2	103	180	..	·25	3·62	·12	1·50	3·49	·25	13·23	22·47	36·31	37
..	..	10	..	1	11	96	296	9·66	·13	5·31	3·66	3·13	2·48	1·44	12·53	38·65	38·50	38		
..	..	2	..	..	2	154	468	6·94	1·03	3·36	10·95	3·04	8·46	·22	16·70	50·74	47·48	39
1	1	10	..	..	12	209	420	..	..	·07	5·90	3·45	3·78	·80	13·85	27·83	30·36	40
..	..	1	..	..	1	172	299	..	..	7·81	3·35	2·65	3·77	·14	24·00	41·71	46·67	41
..	..	45	..	..	46	1,233	1,974	·03	·08	1·09	1·86	3·15	5·14	·75	20·10	32·20	36·73	42
1	..	4	..	..	4	133	208	..	..	..	7·59	1·06	2·13	·61	20·19	31·58	36·11	43
..	..	1	..	..	2	372	795	·01	..	..	12·77	1·67	·84	·07	13·54	28·93	39·75	44
..	..	6	1	1	8	315	648	..	..	..	10·93	2·20	5·67	·46	18·21	37·46	34·88	45

ANNUAL STATEMENT NO. VI-B.—*Births and Deaths registered from different*
18—21,

1	2	3	4				5	6	7	8	9	10
No.	Towns.	Popula- tion (Census 1921).	BIRTHS.				Cholera.	Small-pox.	Plague.	Fever.	Dysentery and diarrhoea.	Respiratory diseases.
			Males.	Females.	Total.	Birth rate.						
NORTH-WEST BORDER DIVISION.												
46	Pakòkku	19,507	281	261	542	27.78	...	6	...	38	3	82
47	Shwebo	10,605	156	146	302	28.48	1	2	105	30	2	89
48	Ye-u	2,742	75	75	150	54.70	...	...	22	30	1	41
49	Sagaing	11,858	214	223	437	36.85	1	...	95	117	9	17
50	Mònywa	9,225	153	164	317	34.36	...	3	11	44	6	98
MANDALAY DIVISION.												
51	Mandalay	148,917	3,625	3,395	7,020	47.14	145	47	877	751	420	1,214
52	Maymyo	16,558	309	286	595	35.93	...	...	1	70	21	100
53	Myitngè	3,439	105	107	212	61.65	...	4	2	28	6	8
54	Kyaukse	6,107	92	92	184	30.13	2	...	1	38	8	32
55	Meiktila	8,868	151	132	283	31.91	...	1	93	31	6	10
56	Yamèthin	8,869	167	113	280	31.57	...	...	44	32	6	81
57	Pyinmana	14,886	150	163	318	21.36	1	2	245	71	46	110
58	Pyawbwè	4,704	55	47	102	21.68	...	2	3	29	6	43
59	Myingyan	18,931	210	213	423	22.34	...	2	1	144	12	91
60	Nyaung-u	7,094	75	82	157	22.13	5	2	1	26	1	...
61	Magwe	7,819	106	105	211	26.99	4	18	...	30	7	9
62	Taungdwingyi ...	6,306	118	109	227	36.00	1	9	...	44	2	62
63	Yenangyaung ...	9,515	126	125	251	26.38	...	139	22	81	26	29
64	Minbu	5,403	105	86	191	35.35	...	11	...	22	7	59
65	Salin	6,834	101	113	214	31.31	...	..	...	22	3	46
Total of Towns, Burma		1,217,011	16,563	15,660	32,226	26.48	470	861	4,694	5,164	2,598	7,929
Total of Rural Districts, Burma.		9,605,607	147,515	139,668	287,183	29.90	1,018	1,985	2,912	73,465	4,087	2,925
GRAND TOTAL, BURMA.		10,822,618	164,081	155,328	319,409	29.51	1,488	2,846	7,606	78,629	6,685	10,854

causes in the towns of Burma during the year 1923. (Paragraphs 11, 14, 24 and 29)—concl'd.

11						12	13	14										15
Injuries.						All other causes.	Total deaths from all causes.	Ratio of deaths per 1,000 of population.										No.
Suicide.		Wounding or accident.	Snake bite or killed by wild beasts.	Rabies.	Total.			Cholera.	Small-pox.	Plague.	Fever.	Dysentery and Diarrhoea.	Respiratory diseases.	Injuries.	All other causes.	From all causes.		
Males.	Females.															For the year.	Mean of previous five years.	
...		3	1	...	4	415	548	...	·31	...	1·95	·15	4·20	·21	21·27	28·09	37·18	46
...		2	...	...	2	141	372	·09	·19	9·90	2·83	·19	8·39	·19	13·30	35·08	44·84	47
...		...	...	...	...	31	125	...	...	8·02	10·94	·36	14·95	...	11·31	45·59	...	48
...	..	19	...	...	19	185	443	08	...	8·01	9·87	·76	1·43	1·60	15·60	37·36	38·63	49
...	...	5	...	...	5	89	256		·33	1·19	4·77	·65	10·62	·54	9·65	27·75	38·10	59
...	...	53	6	3	62	3,599	7,115	·97	·33	5·89	5·04	2·82	8·15	·42	34·17	47·78	56·04	51
...	..	8	...	1	9	182	383	...	...	·06	4·23	1·27	6·04	·54	10·99	23·13	36·69	52
...	...	1	...	...	1	150	199	...	1·16	·58	8·14	1·74	2·33	·29	43·62	57·87	54·12	53
...	...	5	...	...	5	72	158	·33	...	·16	6·22	1·31	5·24	·82	11·79	25·87	37·53	54
2	...	4	...	1	7	149	297	...	·11	10·49	3·50	·68	1·13	·79	16·80	33·49	54·92	55
...	...	2	...	...	2	92	257	...	...	4·96	3·61	·63	9·13	·23	10·37	28·98	31·18	56
...	1	5	...	2	8	235	718	·07	·13	16·46	4·77	3·09	7·39	·54	15·79	48·23	37·95	57
...	...	2	...	...	2	54	139	...	·43	·64	6·16	1·28	9·14	·43	11·48	29·55	38·54	58
...	...	3	2	...	5	328	583	...	·11	·05	7·61	·63	4·81	·26	17·33	30·80	49·33	59
...	...	...	1	...	1	63	99	·70	·28	·14	3·67	·14	...	·14	8·88	13·96	34·29	60
...	...	2	1	...	3	149	220	·51	2·30	...	3·84	·90	1·15	·38	19·03	28·14	52·88	61
...	...	5	3	1	9	85	212	·16	1·43	...	6·98	·32	9·83	1·43	13·48	33·62	31·59	62
...	...	11	...	...	11	231	539	...	14·61	2·31	8·51	2·73	3·05	1·16	24·28	56·65	48·39	63
1	...	8	...	1	10	45	148	...	2·04	...	4·07	1·34	9·81	1·85	8·33	27·39	35·59	64
...	...	2	...	...	2	171	244	...	...	...	3·22	·44	6·73	·29	25·02	35·70	35·09	65
17	5	744	44	17	827	20,599	43,142	·39	·71	3·86	4·24	2·13	16·52	·68	16·93	35·45	42·81	
74	53	1,337	1,673	239	3,376	92,973	182,741	·11	·21	·30	7·65	·43	·30	·35	9·68	19·02	26·02	
91	58	2,081	1,717	256	4,203	113,572	225,883	·14	·26	·70	7·27	·62	1·00	·39	10·49	20·87	27·93	

STATEMENT VI (a).—*Supplement to Annual*

1	2	3	4	5									
				Fevers.									
				Malaria.		Enteric.		Measles.		Other fevers.		Total fevers	
Division.	No.	Towns.	Popula- tion (Census 1921).	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.
ARAKAN	1	Akyab	36,569	184	5.03	...	...	...	...	26	.71	210	5.74
	2	Minbya	2,323	16	6.89	...	...	...	...	16	6.89	32	13.78
	3	Kyaukpyu	3,884	...	...	...	...	...	...	37	9.53	87	9.53
	4	Sandoway	3,762	...	...	1	.27	...	...	40	10.63	41	10.90
RAN- GOON.	5	Rangoon	341,962	350	1.02	47	.14	6	.02	226	.66	629	1.84
	6	Insein	14,308	1	.07	...	...	...	...	73	5.45	79	5.52
	7	Syriam	15,193	1	.07	1	.07	...	...	73	4.80	75	4.94
	8	Thongwa	8,153	25	3.07	...	...	...	...	...	...	25	3.07
PEGU ...	9	Tharrawaddy	3,625	6	1.66	...	...	1	.28	10	2.76	17	4.69
	10	Thonzè	6,591	24	3.64	1	.15	...	...	3	.45	28	4.25
	11	Zigôn	6,916	14	2.02	...	...	...	...	6	.87	20	2.89
	12	Letpadan	9,901	2	.20	...	...	...	...	58	5.86	60	6.06
	13	Gyobingauk	7,668	18	2.35	...	...	...	...	47	6.13	65	8.48
	14	Minhla	3,829	7	1.83	...	...	1	.26	6	1.57	14	3.66
	15	Nattalin	4,898	...	...	...	...	...	...	39	7.96	39	7.96
	16	Pegu	18,769	72	3.84	1	.05	...	...	115	6.13	188	10.02
	17	Nyaunglebin	7,496	19	2.53	...	...	...	...	12	1.60	31	4.14
	18	Prome	26,067	75	2.88	1	.04	4	.15	33	1.27	113	4.23
	19	Shwedaung	9,108	34	3.73	...	...	...	...	...	...	34	3.73
	20	Paungdè	14,154	10	.71	...	...	4	.28	45	3.18	59	4.17
	21	Toungoo	19,332	40	2.07	1	.06	3	...	43	2.22	87	4.50
	22	Shwegyin	5,758	40	6.95	1	.17	...	...	...	...	41	7.12
	23	Pyu	6,676	46	6.89	...	...	...	...	7	1.05	53	7.94
	24	Thayetmyo	10,768	13	1.21	1	.09	1	.09	20	1.86	35	3.25
	25	Allanmyo	11,219	49	4.37	4	.36	2	.18	4	.36	59	5.26
IRRA- WADDY.	26	Bassein	42,563	20	.47	23	.66	1	.02	20	.47	69	1.62
	27	Ngathalinggyaung	5,122	11	2.15	...	...	...	...	1	.20	12	2.34
	28	Kyônpyaw	6,881	11	1.60	3	.44	...	...	17	2.47	31	4.50
	29	Henzada	23,651	37	1.6	7	.30	...	...	8	.34	52	2.20
	30	Myanaung	7,793	20	2.57	...	...	3	.38	24	3.08	47	6.03
	31	Kyangan	7,664	6	.85	...	...	...	...	30	4.26	36	5.10
	32	Myaungmya	6,280	19	3.03	...	...	2	.32	12	1.91	33	5.25
	33	Wakema	8,447	29	3.43	...	...	2	.24	40	4.74	71	8.41
	34	Mawlamyainggyun	6,115	22	3.60	1	.16	...	...	4	.65	27	4.42
	35	Ma-ubin	6,812	3	.44	1	.15	...	...	47	6.90	51	7.49
	36	Yandoon	9,314	11	1.18	3	.32	...	...	25	2.68	39	4.17
	37	Danubyu	8,012	1	.12	...	...	...	...	...	...	1	.12
TENAS- SERIM.	38	Pyapôn	7,659	28	3.66	...	...	...	...	...	...	28	3.66
	39	Kyaiklat	9,224	83	9.00	...	...	...	...	18	1.95	101	10.95
	40	Thatôn	15,091	17	1.13	...	...	...	...	72	4.77	89	5.90
	41	Kyaikto	7,168	8	1.12	...	...	...	...	16	2.23	24	3.35
	42	Moulmein	61,301	43	.70	17	.28	...	...	54	.88	114	1.86
	43	Kawkaik	6,557	17	2.58	2	.30	...	...	31	4.71	50	7.59
	44	Tavoy	27,480	3	.11	...	...	1	.04	347	12.83	351	12.77
	45	Mergui	17,297	19	1.10	...	...	19	1.10	151	8.73	189	10.93
NORTH- WEST BORDER.	46	Pakôkku	19,507	5	.26	...	...	4	.21	29	1.49	38	1.95
	47	Shwebo	10,605	14	1.32	3	.28	...	...	13	1.23	30	2.83
	48	Ye-u	2,742	2	.73	2	.73	...	...	26	9.48	30	10.94
	49	Sagaing	11,858	15	1.26	3	.25	...	...	99	8.35	117	9.87
	50	Mônywa	9,225	10	1.08	...	...	...	...	34	3.69	44	4.77
MANDA- LAY.	51	Mandalay	148,917	583	3.91	106	.71	19	.13	43	.29	751	5.04
	52	Maymyo	16,558	39	2.36	7	.42	1	.06	23	1.39	70	4.23
	53	Myitngè	3,439	1	.29	...	...	...	...	27	7.85	28	8.14
	54	Kyauksè	6,107	7	1.15	...	...	...	...	31	5.08	38	6.22
	55	Meiktila	8,868	6	.68	2	.23	...	...	23	2.59	31	3.50
	56	Yamèthin	8,869	13	2.03	1	.11	1	.11	12	1.35	32	3.61
	57	Pyinmana	14,836	41	2.75	3	.20	4	.27	23	1.55	71	4.77
	58	Pyawbwè	4,704	...	...	...	...	...	...	29	6.16	29	6.16
	59	Myingyan	18,931	10	.53	1	.05	...	...	133	7.03	144	7.61
	60	Nyaung-u	7,094	...	...	...	...	...	...	26	3.67	26	3.67
	61	Magwe	7,819	...	...	...	...	2	.26	28	3.58	30	3.84
	62	Taungdwingyi	6,308	36	5.71	...	...	5	.79	3	.48	44	6.98
	63	Yenangyaung	9,515	10	1.05	...	...	...	...	71	7.46	81	8.51
	64	Minbu	5,403	...	...	3	.56	...	...	19	3.52	22	4.07
	65	Salin	6,834	7	1.02	...	...	4	.59	11	1.61	22	3.22
Total of Towns Burma			1,217,011	2,258	1.86	252	.21	90	.07	2,564	2.11	5,161	4.24

Statement VI-B 1923. (Paragraphs 16, 31 and 32).

6		7		8		9		10		11		12	13			14	15
Beri-Beri.		Dysentery.		Diarrhoea.		Pneumonia.		Phthisis.		Other respi- ratory diseases.		Death from Child-birth.	Death under one year.			Infant mortality rate.	No.
Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.	Death.	Ratio.		Male.	Female.	Total.		
6	16	19	52	5	14	73	200	21	57	2	05	9	90	88	178	273.85	1
...	...	5	215	...	...	...	...	...	...	4	172	...	5	6	11	174.60	2
...	...	2	51	1	26	...	51	...	...	4	103	4	8	6	14	129.63	3
...	...	1	27	...	...	1	27	...	...	2	53	1	8	7	15	142.66	4
116	34	365	107	473	138	1,313	384	887	259	818	239	21	1,139	953	2,092	341.61	5
...	...	9	63	9	63	14	98	1	07	92	648	...	29	18	47	213.64	6
2	13	7	46	5	33	18	118	7	46	44	290	3	20	16	36	182.74	7
...	...	22	270	9	110	11	135	...	...	13	159	4	23	13	36	163.19	8
...	...	2	55	3	83	8	221	5	138	6	166	...	7	4	11	142.86	9
...	...	6	91	3	45	3	45	...	...	73	1107	...	15	13	33	169.42	10
4	58	4	58	7	101	13	188	5	72	5	72	2	14	10	24	136.36	11
...	...	1	10	5	50	...	...	3	30	1	10	...	28	15	43	300.70	12
...	...	10	130	6	78	7	91	13	170	18	235	...	36	24	60	301.51	13
...	...	10	261	6	157	7	183	...	...	5	131	...	9	5	14	167.30	14
...	...	...	...	...	...	...	...	...	...	...	...	...	2	3	5	90.91	15
...	...	12	64	23	123	32	170	15	80	11	59	4	81	54	135	240.21	16
2	27	7	93	8	107	39	520	...	...	8	107	7	36	32	68	333.31	17
...	...	39	150	31	119	108	414	18	69	74	284	12	117	109	226	376.67	18
...	...	4	44	1	11	...	...	...	...	67	736	1	26	21	47	213.64	19
...	...	15	106	5	35	33	233	3	21	145	1024	5	71	51	122	308.08	20
2	10	54	279	27	140	29	150	10	52	85	455	14	53	33	86	181.43	21
...	...	13	226	4	69	2	35	...	...	15	261	1	14	11	25	159.24	22
1	15	2	30	13	195	8	120	2	30	27	404	1	14	13	27	180.00	23
...	...	3	28	...	...	...	...	...	...	6	56	1	37	32	69	413.17	24
...	...	26	232	4	33	32	285	3	27	16	143	3	36	26	62	223.83	25
10	23	43	101	20	47	46	108	85	82	112	263	17	185	160	345	306.78	26
...	...	10	195	1	20	10	195	6	117	11	215	1	21	14	35	273.44	27
...	...	4	53	2	29	8	116	5	73	5	73	2	19	9	23	201.44	28
...	...	15	63	17	72	182	770	48	203	5	21	15	106	76	182	233.03	29
...	...	12	154	14	180	14	180	4	51	13	167	6	21	21	42	221.05	30
...	...	14	138	1	14	1	14	...	...	8	113	3	13	13	26	134.02	31
...	...	7	111	14	223	11	175	3	48	41	653	1	23	19	42	244.19	32
...	...	13	154	21	249	7	83	8	95	24	284	11	49	42	91	342.11	33
...	...	16	262	21	343	13	213	5	82	32	523	...	16	21	37	234.18	34
...	...	8	117	8	117	6	83	2	29	19	279	2	29	26	55	272.28	35
...	...	13	139	21	225	16	171	...	...	15	161	5	23	13	36	163.85	36
...	...	10	125	2	25	2	25	7	87	19	237	2	16	16	32	186.05	37
...	...	7	91	17	224	4	52	11	144	4	52	1	8	9	17	84.58	38
...	...	10	103	18	195	41	414	22	239	15	163	2	28	37	65	369.32	39
...	...	25	166	27	179	5	33	35	232	17	113	3	64	29	93	216.28	40
...	...	5	70	14	195	18	261	9	126	...	...	4	43	13	56	297.87	41
1	02	59	96	134	219	52	85	81	132	182	297	26	211	169	380	241.53	42
1	15	6	91	1	15	...	...	...	...	14	213	4	43	28	71	294.61	43
7	25	34	124	12	44	3	11	...	...	20	73	6	101	74	175	198.19	44
22	127	25	145	13	75	7	40	...	...	91	526	4	101	75	176	350.60	45
...	...	3	15	...	...	...	...	...	...	82	420	...	90	66	156	287.82	46
3	28	...	...	2	19	5	47	2	19	82	773	2	63	42	110	364.24	47
1	36	1	36	...	...	1	36	1	36	39	1422	2	21	13	34	226.67	48
1	08	7	59	...	17	3	25	3	25	11	93	3	35	52	87	199.08	49
...	...	2	22	4	43	8	87	1	11	89	965	3	40	44	84	261.98	50
10	07	189	127	231	155	346	232	231	155	637	423	77	1,264	1,013	2,277	324.36	51
8	48	5	30	16	97	21	127	17	103	62	374	7	63	56	119	200.00	52
...	...	2	58	4	116	...	...	...	...	8	233	...	33	45	73	367.92	53
...	...	7	116	1	16	12	196	2	33	18	295	1	15	24	39	211.96	54
...	...	3	34	2	34	2	23	...	...	8	90	1	41	31	72	254.42	55
...	...	3	34	3	34	52	586	...	...	29	327	6	44	48	92	328.57	56
...	...	28	188	18	121	51	343	3	20	56	376	4	74	42	116	364.78	57
...	...	3	64	3	64	...	...	...	...	43	914	...	19	33	42	411.76	58
2	11	8	42	4	21	1	05	4	21	86	454	19	116	99	215	508.27	59
...	...	1	14	...	...	...	...	...	...	...	...	1	10	7	17	108.28	60
...	...	5	64	...	26	3	33	...	...	6	77	...	29	23	57	270.14	61
...	...	1	16	1	16	...	...	...	...	62	983	1	39	36	75	330.40	62
...	...	9	95	17	179	1	11	...	...	23	294	6	46	46	92	366.53	63
...	...	1	19	6	111	20	370	21	389	12	222	...	24	23	47	246.07	64
...	...	2	29	1	15	46	673	...	...	...	...	5	29	31	60	280.37	65
199	16	1,254	103	1,344	110	2,771	228	1,609	132	3,549	293	346	5,138	4,201	9,339	289.80	

ANNUAL STATEMENT NO. VII.—Deaths registered from
the year 1923.

1	2	3		4								
No.	Divisions and District.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from cholera were reported.	Number in each district.	Number from which deaths from cholera were reported.							
ARAKAN DIVISION.												
1	Akyab	11	1	871	1	1	...	1	...	...	...	...
2	Kyaukpyu	13	...	355	...	...	...	...	...	...	...	...
3	Sandoway	10	...	178	...	...	...	...	...	...	...	...
RANGOON DIVISION.												
4	Rangoon	1	1	1	1	2	2	4	11	10	6	5
5	Insein	14	4	376	7	12	...	2	1	...	3	1
6	Hanthawaddy	16	2	470	16	1	2	8	31	4	...	...
PEGU DIVISION.												
7	Tharrawaddy... ..	16	3	556	4	11	6	...	1	...	...	...
8	Pegu	22	3	440	10	...	...	...	9	10	...	...
9	Prome	21	4	446	5	5	...	...	1	...	...	1
10	Toungoo	20	4	563	12	...	...	...	...	12	2	...
11	Thayetmyo	16	3	643	6	6	...	...	4	...	7	...
IRRAWADDY DIVISION.												
12	Bassein	19	4	691	4	...	...	...	...	1	2	2
13	Henzada	21	10	624	16	30	3	...	1	2	1	6
14	Myaungmya	19	13	591	50	6	7	13	62	25	15	...
15	Ma-ubin	9	8	314	92	12	49	62	16	14	51	2
16	Pyapön	7	7	376	28	...	5	71	164	48	...	...
TENASSERIM DIVISION.												
17	Thatön	16	5	387	9	...	...	8	3	10	4	...
18	Amherst	10	7	350	11	2	...	1	25	2	2	...
19	Tavoy	6	3	180	4	...	...	...	...	...	...	1
20	Mergui	11	1	148	2	...	...	...	...	2	2	...
NORTH-WEST BORDER DIVISION.												
21	Pakókku	9	3	743	9	1	...	...	...	...	...	...
22	Shwebo	14	3	631	4	...	...	...	...	...	1	...
23	Sagaing	10	6	283	18	...	...	...	...	...	...	...
24	Lower Chindwin	10	...	362	...	...	...	...	...	...	...	...
MANDALAY DIVISION.												
25	Mandalay	15	6	336	48	1	...	...	...	1	1	6
26	Kyaukse	11	4	278	22	...	...	...	...	...	1	...
27	Meiktila	4	1	401	1	...	...	...	...	...	...	...
28	Yamèthin	16	2	359	4	...	...	...	...	...	1	...
29	Myingyan	13	6	197	6	19	...	11	...	...	...	...
30	Magwe	9	7	468	9	7	...	...	...	...	1	4
31	Minbu	13	2	341	7	20	5	...	...	...	...	...
TOTAL, BURMA		402	123	12,962	406	145	78	181	329	141	100	28

Cholera in the Districts of Burma during each month of
(Paragraphs 18 and 19).

5					6			7			8	9
August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years	No.
					Males.	Females.	Total.	Males.	Females.	Total.		
...	1	1	2	·00	·00	·00	1·07	1
...	·63	2
...	·98	3
1	1	1	2	3	45	3	48	·19	·03	·14	·47	4
...	1	13	7	20	·03	·05	·07	·20	5
...	28	18	46	·14	·11	·13	·24	6
...	10	7	17	·04	·03	·03	·74	7
...	8	11	19	·03	·05	·04	·73	8
1	1	...	1	1	6	5	11	·03	·03	·03	1·27	9
...	1	1	3	7	21	5	26	·11	·03	·07	·37	10
...	13	4	17	·10	·03	·07	·83	11
...	4	1	5	·02	·00	·01	·64	12
...	21	22	43	·08	·03	·08	·84	13
...	91	36	127	·46	·21	·34	·72	14
...	132	74	206	·78	·46	·62	1·03	15
...	203	82	285	1·31	·62	1·00	1·15	16
...	14	11	25	·06	·05	·05	·46	17
...	1	14	19	33	·06	·10	·08	·47	18
3	3	1	4	·04	·01	·03	·38	19
...	2	2	4	·03	·03	·03	1·43	20
...	28	17	12	29	·08	·05	·06	·70	21
1	6	6	2	8	·03	·01	·02	·03	22
...	1	3	13	42	36	23	59	·23	·13	·18	·57	23
...	·13	24
11	15	24	115	118	169	133	292	·87	·77	·82	·24	25
...	52	32	21	53	·45	·29	·37	·24	26
...	4	2	2	4	·01	·01	·01	·24	27
...	12	7	6	13	·04	·04	·04	·29	28
...	6	...	23	13	36	·11	·06	·03	·31	29
...	6	15	3	18	·07	·01	·04	·40	30
...	24	11	35	·18	·08	·13	·17	31
17	19	29	140	281	953	635	1,488	·17	·10	·14	·58	

ANNUAL STATEMENT NO. VIII.—Deaths registered from Small-pox
(Paragraphs)

1	2	3		4		5						
No	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from small-pox were reported.	Number in each district.	Number from which deaths from small-pox were reported.							
ARAKAN DIVISION.												
1	Akyab	11	9	871	51	28	23	28	40	39	5	32
2	Kyaukpyu	13	...	355	...	...	...	...	...	...	...	...
3	Sandoway	10	2	178	4	...	...	6	3	1	...	...
RANGOON DIVISION.												
4	Rangoon	1	1	1	1	15	38	105	94	47	37	12
5	Insein	14	5	376	24	1	2	5	6	7	12	2
6	Hanthawaddy	16	6	470	16	...	2	2	...	1	4	1
PEGU DIVISION.												
7	Tharrawaddy... ..	16	4	556	5	...	1	2	1	4	4	4
8	Pegu	22	17	440	75	8	14	19	30	30	17	13
9	Prome	21	14	446	48	4	11	22	42	30	7	2
10	Toungoo	20	4	563	13	...	...	...	5	6	2	3
11	Thayetmyo	16	10	643	11	1	4	1	27	18	38	9
IRRAWADDY DIVISION.												
12	Bassein	19	1	691	1	...	...	...	...	...	...	1
13	Henzada	21	11	624	28	7	5	10	13	9	7	2
14	Myaungmya	19	8	591	10	...	4	15	5	5	6	2
15	Ma-ubin	9	9	314	45	6	6	21	24	30	9	2
16	Pyapôn	7	6	376	18	...	9	10	19	5	2	9
TEVASSERIM DIVISION.												
17	Thatôn	16	4	387	4	...	1	...	...	...	4	...
18	Amherst	10	3	350	6	...	1	...	2	1	1	2
19	Tavoy	6	1	180	2	...	...	...	...	...	...	...
20	Mergui	11	2	148	3	...	...	...	...	...	...	...
NORTH-WEST BORDER DIVISION.												
21	Pakôkku	9	6	743	72	1	5	20	27	22	11	18
22	Shwebo	14	4	634	5	...	...	...	1	1	1	6
23	Sagaing	10	2	283	3	...	...	...	...	5	4	4
24	Lower Chindwin	10	6	362	8	...	...	1	1	4	2	2
MANDALAY DIVISION												
25	Mandalay	15	3	336	3	2	2	2	4	11	9	7
26	Kyaukse	11	...	278	...	...	...	...	...	...	...	...
27	Meiktila	4	4	401	27	...	1	8	14	24	7	1
28	Yamethin	16	3	359	3	...	...	...	2	...	2	1
29	Myingyan	13	10	197	10	...	...	...	8	3	5	1
30	Magwe	9	9	468	257	66	134	109	80	71	65	12
31	Minbu	13	9	341	222	2	20	47	108	151	111	38
Total		402	173	12,962	975	141	288	433	556	525	372	183

in the Districts of Burma during each month of the year 1923.
18 and 20).

6					7			8		9			10	11
August.	September.	October.	November.	December.	Total			Number of these deaths among children.		Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Males.	Females.	Total.	Under one year.	One and under ten years.	Males.	Females.	Total.		
3	...	1	...	1	107	98	205	8	12	.35	.37	.36	.21	1
...	...	...	...	...	...	...	...	...	...	...	...	...	.15	2
...	...	...	...	...	5	5	10	...	...	.09	.09	.09	.18	3
7	2	2	3	1	253	110	363	59	72	1.07	1.01	1.06	.61	4
...	...	...	1	...	24	12	36	...	1	.15	.09	.12	.07	5
3	2	2	2	4	14	9	23	1	4	.07	.06	.06	.13	6
...	...	...	...	...	6	10	16	2	4	.02	.04	.03	.11	7
12	5	2	3	7	106	54	160	18	71	.45	.26	.36	.09	8
...	...	...	...	...	62	56	118	4	48	.34	.30	.32	.04	9
...	...	...	...	...	11	5	16	4	6	.06	.03	.04	.32	10
31	6	4	1	3	87	56	143	8	39	.69	.43	.56	.33	11
...	...	...	...	...	1	...	1	...	...	.00	...	.00	.41	12
...	1	3	1	1	34	25	59	1	4	.12	.09	.11	.08	13
...	...	...	3	2	29	13	42	1	10	.15	.07	.11	.08	14
4	...	1	...	1	69	35	104	2	10	.41	.22	.32	.09	15
10	6	3	5	...	42	36	78	11	21	.27	.27	.27	.08	16
...	...	1	...	...	5	1	6	...	2	.02	.00	.01	.22	17
1	1	1	...	...	10	...	10	...	1	.04	...	.02	.26	18
2	...	...	...	...	1	1	2	1	1	.01	.01	.01	...	19
...	...	...	2	12	12	2	14	...	1	.16	.03	.10	.39	20
4	...	...	...	7	75	40	115	...	...	.33	.17	.25	.06	21
5	...	...	...	...	12	2	14	...	5	.03	.01	.04	.15	22
...	3	1	...	...	6	11	17	1	8	.04	.06	.05	.24	23
1	...	...	1	6	12	6	18	2	5	.08	.03	.05	.06	24
2	2	2	2	6	36	15	51	3	18	.20	.09	.14	.80	25
...	...	...	...	...	...	...	...	...	...	...	...	...	.01	26
1	2	...	...	4	33	29	62	8	26	.24	.19	.21	.09	27
...	1	...	...	1	4	3	7	2	...	.02	.02	.02	.03	28
32	4	...	10	5	34	34	68	17	12	.16	.15	.15	.45	29
2	2	2	1	1	337	203	540	24	70	1.59	.98	1.29	.09	30
24	9	6	22	5	309	234	543	24	32	2.30	1.67	1.98	.09	31
144	46	31	57	67	1,736	1,110	2,846	192	483	.31	.21	.26	.19	

ANNUAL FORM NO. IX.—Deaths registered from Fevers in the

1	2			3		4						
No.	Divisions and Districts.			Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.
				Number in each dis- trict.	Number from which deaths from fevers were reported.	Number in each dis- trict.	Number from which deaths from fevers were reported.					
ARAKAN DIVISION.												
1	Akyab	...	...	11	11	871	871	841	500	429	386	467
2	Kyaukpyu	...	...	13	13	355	324	158	116	132	239	120
3	Sandoway	...	...	10	10	178	178	153	111	70	95	76
RANGOON DIVISION.												
4	Rangoon	...	...	1	1	1	1	57	37	59	45	40
5	Insein	...	...	14	14	376	376	260	214	252	224	139
6	Hanthawaddy	...	...	16	16	470	470	178	159	146	164	131
PEGU DIVISION.												
7	Tharrawaddy	...	...	16	16	556	386	660	409	369	263	273
8	Pegu	...	...	22	20	440	313	181	187	190	182	187
9	Prome	...	...	21	21	446	309	450	279	247	233	239
10	Toungoo	...	...	20	20	563	482	362	327	319	194	203
11	Thayetmyo	...	...	16	16	643	583	336	233	283	238	155
IRRAWADDY DIVISION.												
12	Bassein	...	...	19	19	691	691	231	164	106	236	179
13	Henzada	...	...	21	21	624	603	354	248	341	208	169
14	Myaungmya	...	...	19	19	591	550	155	126	122	107	162
15	Ma-ubin	...	...	9	9	314	290	100	91	106	100	92
16	Pyapôn	...	...	7	7	376	117	152	149	186	134	183
TENASSERIM DIVISION.												
17	Thatôn	...	...	16	16	387	356	276	248	226	224	215
18	Amherst	...	...	10	10	350	350	137	130	124	117	120
19	Tavoy	...	...	6	6	180	180	272	274	185	187	200
20	Mergui	...	...	11	11	148	102	97	123	83	108	93
NORTH-WEST BORDER DIVISION.												
21	Pakôkku	...	...	9	9	743	712	412	302	330	348	300
22	Shwebo	...	...	14	14	634	623	287	229	251	219	180
23	Sagaing	...	...	10	10	283	283	279	149	194	205	145
24	Lower Chindwin	...	...	10	10	362	228	261	302	160	418	303
MANDALAY DIVISION.												
25	Mandalay	...	...	15	15	336	320	363	266	295	218	246
26	Kyaukse	...	...	11	11	278	278	218	107	148	102	163
27	Meiktila	...	...	4	4	401	201	220	166	112	75	87
28	Yamethin	...	...	16	16	359	354	301	377	310	171	183
29	Myingyan	...	...	13	13	197	197	77	124	137	164	149
30	Magwe	...	...	9	9	468	322	321	219	386	177	268
31	Minbu	...	...	13	13	341	341	369	188	251	226	264
Total				402	400	12,962	11,341	8,518	6,554	6,549	6,037	5,734

Districts of Burma during each month of the year 1923. (Paragraph 24).

5							6			7			8	9
June.	July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
							Males.	Females.	Total.	Males.	Females.	Total.		
467	692	929	872	268	380	552	3,570	3,210	6,780	11.58	12.08	11.81	18.78	1
89	104	159	125	26	122	119	781	728	1,509	8.09	7.05	7.55	10.79	2
90	63	122	102	111	59	95	570	577	1,147	10.31	10.17	10.24	15.14	3
55	70	71	56	42	47	50	515	111	629	2.18	1.08	1.84	6.98	4
258	211	236	143	228	108	133	1,383	1,023	2,406	8.82	7.61	8.21	12.27	5
208	159	162	134	117	106	128	1,078	713	1,791	5.36	4.36	4.91	9.63	6
319	385	428	371	332	302	318	2,287	2,142	4,429	9.29	8.70	8.99	14.89	7
297	210	200	149	125	170	202	1,431	879	2,310	6.08	4.18	5.18	10.17	8
277	321	341	230	253	226	340	1,741	1,695	3,436	9.52	8.98	9.25	14.66	9
241	297	223	305	135	167	259	1,658	1,377	3,035	8.39	7.47	7.95	13.89	10
220	250	264	145	173	239	254	1,412	1,378	2,790	11.27	10.59	10.92	15.39	11
344	304	257	213	183	142	125	1,372	1,112	2,484	5.42	4.70	5.07	10.46	12
348	363	452	332	314	313	302	1,974	1,770	3,744	7.22	6.38	6.80	11.43	13
181	164	179	165	127	150	158	1,089	707	1,796	5.53	4.07	4.85	12.07	14
107	126	142	72	81	87	76	676	504	1,180	4.01	3.12	3.57	6.08	15
233	145	124	46	91	89	99	1,023	608	1,631	6.53	4.59	5.64	9.79	16
260	349	336	286	235	185	362	1,758	1,444	3,202	7.15	6.41	6.80	10.46	17
131	137	147	88	101	89	106	846	581	1,427	3.79	2.99	3.41	6.92	18
185	266	265	261	192	190	292	1,395	1,364	2,759	17.22	18.00	17.59	19.82	19
81	105	86	155	126	150	160	740	627	1,367	10.15	10.02	10.09	13.86	20
344	324	377	337	433	357	359	2,166	2,057	4,223	9.67	8.51	9.07	11.63	21
200	233	194	199	198	281	373	1,452	1,392	2,844	7.86	6.74	7.27	13.04	22
209	180	132	171	230	175	274	1,185	1,158	2,343	7.64	6.74	7.17	7.17	23
106	158	156	192	595	211	272	1,556	1,578	3,134	9.93	8.48	9.14	9.54	24
242	204	215	170	250	301	532	1,811	1,601	3,412	9.90	9.22	9.57	13.08	25
160	135	83	82	129	184	307	901	917	1,818	12.79	12.70	12.74	16.23	26
71	71	91	76	51	23	124	627	540	1,167	4.56	3.55	4.03	7.09	27
172	189	140	82	211	113	473	1,478	1,274	2,752	9.19	7.85	8.52	9.08	28
129	195	146	125	96	110	145	854	743	1,597	4.00	3.25	3.61	6.86	29
229	202	154	96	62	124	261	1,386	1,113	2,499	6.55	5.26	5.90	7.21	30
268	270	249	184	130	225	364	1,580	1,408	2,988	11.75	10.07	10.89	13.35	31
6,511	6,902	7,090	5,964	5,645	5,454	7,671	42,295	36,334	78,629	7.63	6.88	7.27	11.29	

ANNUAL STATEMENT NO. X.—Deaths registered from Dysentery
year

1	2	3		4		5						
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.	Number in each district.	Number from which deaths from dysentery and diarrhoea were reported.							
ARAKAN DIVISION.												
1	Akyab ...	11	11	871	251	16	14	12	12	19	47	95
2	Kyaukpyu ...	13	9	355	42	2	9	2	3	4	5	10
3	Sandoway ...	10	6	178	22	2	5	1	1	2	10	10
RANGOON DIVISION.												
4	Rangoon ...	1	1	1	1	80	74	73	46	61	89	91
5	Insein ..	14	14	376	49	5	7	5	3	8	9	17
6	Hanthawaddy ...	16	16	470	188	17	17	10	35	18	38	28
PEGU DIVISION.												
7	Tharrawaddy ...	16	15	556	64	67	19	13	11	23	28	54
8	Pegu ...	22	13	440	46	9	4	11	7	9	22	11
9	Prome ...	21	14	446	56	20	9	11	11	7	28	38
10	Toungoo ...	20	15	563	24	9	12	6	7	8	18	26
11	Thayetmyo ...	16	13	643	46	2	4	2	2	3	8	21
IRRAWADDY DIVISION.												
12	Bassein ...	19	19	691	153	9	24	8	19	20	22	32
13	Henzada ...	21	21	624	139	27	7	16	9	12	50	52
14	Myaungmya ...	19	19	591	138	26	18	22	42	72	23	27
15	Ma-ubin ...	9	9	314	145	11	28	19	34	36	39	50
16	Pyapôn ...	7	7	376	70	15	12	34	38	46	27	11
TENASSERIM DIVISION.												
17	Thatôn ...	16	16	387	114	24	21	13	20	12	46	45
18	Amherst ...	10	10	350	102	25	19	22	24	35	35	42
19	Tavoy ...	6	6	180	64	10	5	10	3	5	16	26
20	Mergul ...	11	10	148	53	6	5	4	16	17	37	32
NORTH-WEST BORDER DIVISION.												
21	Pakôkku ...	9	9	743	196	13	10	8	19	41	36	39
22	Shwebo ...	14	5	684	12	3	3	5	3	2	9	7
23	Sagaing ...	10	8	283	55	36	26	25	26	24	30	17
24	Lower Chindwin ...	10	9	362	23	4	2	4	11	3	4	7
MANDALAY DIVISION.												
25	Mandalay ...	15	10	336	17	25	20	27	28	36	36	52
26	Kyauksè ...	11	3	278	3	...	1	...	2	2	...	...
27	Melktila ...	4	4	401	19	...	4	3	2	2	5	5
28	Yamèthin ...	16	16	359	29	7	10	6	6	6	6	10
29	Myingyan ...	13	13	197	90	5	3	15	9	7	7	4
30	Magwe ...	9	9	468	13	3	7	5	2	9	10	3
31	Minbu ...	13	11	341	77	4	5	5	2	15	14	30
Total, Burma ...		402	341	12,962	2,291	482	404	397	453	564	753	872

and Diarrhœa in the Districts of Burma during each month of the 1923.

August.	September.	October.	November.	December.	6			7			8	9
					Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Males.	Females	Total.	Males.	Females	Total.		
73	90	28	10	17	215	213	428	.70	.80	.75	1.49	1
24	11	2	5	7	39	45	84	.40	.44	.42	1.59	2
6	4	3	...	...	27	17	44	.49	.30	.39	1.48	3
80	49	45	73	77	571	267	838	2.41	2.54	2.45	3.35	4
6	7	9	4	5	44	41	85	.23	.30	.29	.99	5
27	19	10	10	11	136	104	240	.68	.64	.66	1.12	6
39	31	10	9	8	170	142	312	.69	.58	.63	1.36	7
12	6	12	3	5	76	35	111	.32	.17	.25	.63	8
34	14	5	1	10	100	88	188	.55	.47	.51	1.02	9
20	16	10	6	21	95	64	159	.48	.35	.42	.56	10
13	7	5	10	6	45	38	83	.36	.29	.32	.61	11
28	36	10	22	14	149	95	244	.59	.40	.50	1.70	12
46	24	15	20	14	157	135	292	.57	.49	.53	.98	13
22	17	16	25	19	196	132	328	1.00	.76	.88	1.92	14
27	30	11	6	15	151	185	286	.89	.84	.87	1.01	15
15	7	9	4	6	147	77	224	.94	.58	.78	1.40	16
42	27	13	9	221	278	215	493	1.13	.95	1.05	1.24	17
39	28	23	23	33	234	114	348	1.05	.59	.83	1.73	18
21	25	11	16	13	101	60	161	1.25	.79	1.03	1.53	19
9	9	9	15	17	110	66	176	1.51	1.05	1.30	1.74	20
32	32	28	23	9	158	132	290	.71	.54	.62	.86	21
7	2	4	2	2	33	16	49	.13	.08	.13	.28	22
20	22	29	21	27	138	165	303	.89	.96	.93	.90	23
1	8	10	1	6	23	33	61	.18	.18	.18	.21	24
44	41	48	58	57	269	198	467	1.47	1.14	1.31	1.22	25
1	2	...	...	2	6	4	10	.09	.06	.07	.26	26
4	6	1	2	...	15	19	34	.11	.12	.12	.49	27
12	7	4	10	7	60	31	91	.37	.19	.28	.39	28
17	8	9	4	12	56	44	100	.26	.19	.23	.37	29
3	3	1	2	3	29	22	51	.14	.10	.12	.41	30
9	6	5	1	9	62	43	105	.46	.31	.38	.62	31
739	594	385	395	653	3,895	2,790	6,685	.70	.53	.62	1.07	

ANNUAL STATEMENT NO. XI.—Deaths registered from Respiratory year

1	2	3		4		5						
No.	Divisions and Districts.	Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.	July.
		Number in each district.	Number from which deaths from respiratory diseases were reported.	Number in each district.	Number from which deaths from respiratory diseases were reported.							
ARAKAN DIVISION.												
1	Akyab ...	11	10	871	243	45	28	44	20	33	24	26
2	Kyaukpyu ...	13	6	355	9	...	...	...	...	3	1	...
3	Sandoway ...	10	9	178	17	3	5	1	2	2	4	1
RANGOON DIVISION.												
4	Rangoon ...	1	1	1	1	212	221	301	276	217	302	244
5	Insein ...	14	14	376	40	10	33	19	18	13	9	8
6	Hanthawaddy ...	16	16	470	131	16	27	20	34	24	25	30
PEGU DIVISION.												
7	Tharrawaddy ...	16	15	556	27	63	33	70	34	44	37	40
8	Pegu ...	22	6	440	20	10	12	9	3	8	11	10
9	Prome ...	21	14	446	52	78	48	40	28	29	46	45
10	Toungoo ...	20	4	563	5	12	18	16	16	15	20	20
11	Thayetmyo ...	16	9	643	20	9	5	3	5	3	8	6
IRRAWADDY DIVISION.												
12	Bassein ...	19	12	691	43	20	16	31	25	30	33	32
13	Henzada ...	21	20	624	95	23	40	22	34	27	37	35
14	Myaungmya ...	19	16	591	41	25	14	11	17	14	19	8
15	Ma-ubin ...	9	9	314	199	17	23	34	43	27	41	43
16	Pyapôn ...	7	6	376	34	17	6	25	38	16	20	13
TENASSERIM DIVISION.												
17	Thatôn ...	16	13	387	77	14	13	13	13	11	18	17
18	Amherst...	10	10	350	129	45	41	29	38	47	41	41
19	Tavoy ...	6	5	180	56	5	9	10	12	3	3	13
20	Mergui ...	11	5	148	16	6	7	9	6	7	18	7
NORTH-WEST BORDER DIVISION.												
21	Pakôkku...	9	8	743	74	6	16	14	23	11	12	16
22	Shwebo ...	14	7	634	17	21	23	18	31	17	21	19
23	Sagaing ...	10	7	233	63	41	35	36	36	30	31	32
24	Lower Chindwin ...	10	9	362	14	12	12	9	11	4	13	11
MANDALAY DIVISION.												
25	Mandalay ...	15	7	333	22	122	96	119	94	89	106	109
26	Kyaukse...	11	3	278	3	7	4	1	2	1	...	1
27	Meiktila ...	4	4	401	23	8	1	2	3	3	2	1
28	Yamèthin ...	16	16	359	21	25	24	22	16	22	18	22
29	Myingyan ...	13	9	197	104	12	11	13	16	15	5	5
30	Magwe ...	9	7	468	10	10	7	13	8	3	5	12
31	Minbu ...	13	8	341	55	14	9	16	12	29	9	14
Total ...		402	285	12,962	1,661	943	837	970	920	797	934	881

Diseases in the districts of Burma during each month of the 1923.

August.	September.	October.	November.	December.	6			7			8	9
					Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
					Males.	Females.	Total.	Males.	Females.	Total.		
48 7 1	48 3 4	47 1 1	21 2 ...	16 3 ...	262 10 14	138 10 10	400 20 24	.85 .10 .25	.52 .10 .18	.70 .10 .21	.95 .15 .72	1 2 3
255 8 19	275 12 20	248 14 19	213 12 34	224 8 16	1,992 92 163	1,026 72 121	3,018 164 284	8.42 .59 .81	9.75 .53 .74	8.83 .56 .78	9.31 .82 .84	4 5 6
22 6 39 13 6	34 5 39 10 7	36 10 33 9 11	31 13 42 17 11	34 12 46 18 4	228 76 290 105 51	250 33 226 79 27	478 109 516 184 78	.93 .32 1.59 .53 .41	1.02 .16 1.20 .43 .21	.97 .24 1.39 .48 .30	1.24 .68 1.17 .66 .35	7 8 9 10 11
27 36 18 33 9	25 47 16 34 6	37 35 27 16 5	28 31 17 23 21	25 34 17 9 14	199 229 122 184 114	131 177 81 164 76	330 406 203 348 190	.79 .84 .83 1.09 .73	.55 .64 .47 1.01 .57	.67 .74 .55 1.05 .66	1.23 .99 .55 .84 .98	12 13 14 15 16
20 36 15 7	17 44 10 10	20 45 5 10	28 50 12 22	114 58 8 15	144 338 63 79	154 177 42 45	298 515 105 124	.59 1.51 77 1.03	.68 .91 .55 .72	.63 1.23 .67 .92	.40 1.44 1.00 .81	17 18 19 20
18 13 24 3	11 13 39 15	16 20 31 11	13 19 24 19	16 21 27 5	96 142 174 60	76 94 212 65	172 296 386 125	.42 .77 1.12 .38	.31 .46 1.23 .35	.37 .60 1.18 .36	.76 1.11 .97 .43	21 22 23 24
98 ... 9 28 10 16 9	115 4 1 1 20 11 13 7	132 1 1 20 6 3 6	150 5 1 23 4 12 13	175 8 11 21 17 9 29	783 20 30 141 70 60 103	622 14 13 115 55 51 64	1,405 34 43 256 125 111 167	4.28 .28 .22 .88 .33 .28 .77	3.58 .19 .09 .71 .24 .24 .46	3.94 .24 .15 .79 .28 .26 .61	4.42 .13 .16 .67 .33 .53 .76	25 26 27 28 29 30 31
853	915	879	911	1,014	6,434	4,420	10,854	1.16	.84	1.00	1.17	

ANNUAL STATEMENT NO. XII.—Deaths registered from Plague in the

1	2			3		4								
No.	Divisions and Districts.			Circles of Registration.		Village-tracts.		January.	February.	March.	April.	May.	June.	
				Number in each district.	Number from which deaths from plague were reported.	Number in each district.	Number from which deaths from plague were reported.							
ARAKAN DIVISION.														
1	Akyab	...	...	11	...	871	...	...	...	...	...	...	...
2	Kyaukpyu	...	...	13	...	355	...	...	...	...	...	...	...
3	Sandoway	...	...	10	...	178	...	...	...	...	...	...	...
RANGOON DIVISION.														
4	Rangoon	...	...	1	1	1	1	57	120	247	163	105	137
5	Insein	...	...	14	8	376	5	23	19	12	...	...	...
6	Hanthawaddy	...	...	16	8	470	6	3	4	2	...	4	8
PEGU DIVISION.														
7	Tharrawaddy	...	...	16	11	556	11	142	139	46	4	5	4
8	Pegu	...	...	22	5	440	8	16	37	31	12	...	...
9	Prome	...	...	21	11	446	11	259	128	60	6	...	1
10	Toungoo	...	...	20	8	563	10	15	19	15	5	...	5
11	Thayetmyo	...	...	16	5	643	5	16	72	5	8	...	...
IRRAWADDY DIVISION.														
12	Bassein	...	...	19	9	691	122	19	34	64	41	47	40
13	Henzada	...	...	21	8	624	8	82	68	44	23	26	29
14	Myaungmya	...	...	19	4	591	17	...	...	11	6	13	13
15	Ma-ubin	...	...	9	7	314	7	24	28	13	3	7	4
16	Pyapôn	...	...	7	5	376	7	4	8	30	5	23	33
TENASSERIM DIVISION.														
17	Thatôn	...	...	16	5	387	11	22	18	19	3	2	22
18	Amherst	...	...	10	4	350	7	8	14	40	29	1	13
19	Tavoy	...	...	6	...	180	...	...	...	...	...	...	...
20	Mergui	...	...	11	...	148	...	...	...	...	...	...	...
NORTH-WKST BORDER DIVISION.														
21	Pakôkku	...	...	9	2	743	3	10	24	26	10	...	...
22	Shwebo	...	...	14	7	634	20	119	55	18	6	...	...
23	Sagaing	...	...	10	9	283	37	100	193	105	13	15	3
24	Lower Chindwin	...	...	10	5	362	53	115	196	82	8	...	...
MANDALAY DIVISION.														
25	Mandalay	...	...	15	7	336	30	28	102	126	33	8	2
26	Kyauksè	...	...	11	6	278	9	...	16	2	2	...	...
27	Meiktila	...	...	4	4	401	187	424	296	112	13	15	9
28	Yamèthin	...	...	16	11	359	37	167	128	43	1	1	...
29	Myingyan	...	...	13	2	197	2	...	...	1	...	1	...
30	Magwe	...	...	9	2	462	3	...	...	7	10	...	...
31	Minbu	...	...	13	...	341	...	...	...	...	...	...	...
Total				...	402	144	12,362	617	1,658	1,734	1,191	404	273	323

Districts of Burma during each month of the year 1923. (Para. 18, 21).

5						6			7			8	9
July.	August.	September.	October.	November.	December.	Total.			Ratio of deaths per 1,000 of population.			Mean ratio per 1,000 of previous five years.	No.
						Males.	Females.	Total.	Males.	Females.	Total.		
...	...	...	...	...	...	...	...	...	...	...	...	...	1
...	...	...	...	...	...	...	...	...	...	...	...	...	2
...	...	...	...	...	...	...	...	...	...	...	...	·05	3
129	103	60	20	6	12	813	346	1,159	3·43	3·29	3·39	3·92	4
1	2	2	2	1	1	44	24	68	·28	·18	·23	·35	5
5	5	..	...	...	...	26	5	31	·18	·03	·09	·19	6
6	7	2	1	7	23	197	189	386	·80	·77	·78	·75	7
1	1	...	...	...	...	58	40	98	·25	·19	·22	·21	8
1	7	27	38	45	112	381	303	684	2·08	1·61	1·84	1·31	9
7	5	...	...	...	1	41	31	72	·21	·17	·19	·49	10
...	7	...	...	...	...	76	62	138	·61	·48	·54	·22	11
60	25	9	13	1	6	200	159	359	·79	·67	·73	·61	12
10	7	5	...	1	...	144	151	295	·53	·54	·54	·60	13
3	4	3	...	...	1	37	17	54	·19	·10	·15	·28	14
28	25	8	...	...	4	71	63	139	·42	·42	·42	·38	15
39	3	2	...	...	...	75	66	141	·48	·50	·49	·67	16
8	1	1	...	...	...	44	52	96	·18	·23	·20	·28	17
3	4	3	1	...	...	54	62	116	·24	·32	·28	·45	18
...	...	...	...	...	...	...	...	...	...	...	...	...	19
...	...	...	...	...	...	...	...	...	...	...	...	...	20
...	7	...	...	...	...	25	52	77	·11	·22	·17	...	21
...	...	...	...	7	15	98	122	220	·53	·59	·56	·37	22
8	...	...	12	76	38	300	258	558	1·93	1·50	1·71	·33	23
...	6	...	1	12	4	193	231	424	1·23	1·24	1·24	·33	24
4	7	37	67	136	433	521	473	994	2·85	2·72	2·79	2·8	25
...	...	...	...	19	75	54	60	114	·77	·83	·80	·24	26
7	2	21	...	16	7	508	414	922	3·69	2·72	3·18	·71	27
7	14	15	9	21	17	234	199	433	1·45	1·23	1·34	·42	28
...	...	...	...	...	...	2	...	2	·01	...	·00	·70	29
...	...	...	...	2	7	16	10	26	·08	·05	·06	·24	30
...	...	...	...	...	...	...	...	...	...	...	...	·31	31
316	243	190	164	350	761	4,212	3,394	7,606	·76	·64	·70	·60	

ANNUAL STATEMENT NO. VI(a).—(*Provincial*), showing *Births, Birth-rate, and Infantile mortality statistics of Towns having a population of 10,000 or over for the year 1923.*

1	2	3	4			5	6			7		
No.	Towns.	Popula- tion.	Births.			Birth- rate.	Deaths under one year.			Infantile mortality rate.		
			Male.	Female.	Total.		Male.	Female.	Total.	Male.	Female.	Total.
1	Akyab ...	36,569	345	305	650	17·77	90	88	178	260·87	288·52	273·85
2	Rangoon ...	341,962	3,153	2,971	6,124	17·91	1,139	953	2,092	361·24	320·77	341·61
3	Insein ...	14,308	122	98	220	15·38	29	18	47	237·70	183·67	213·64
4	Syriam ...	15,193	118	79	197	12·97	20	16	36	169·49	202·53	182·74
5	Pegu ...	18,769	284	278	562	29·94	81	54	135	285·21	194·24	240·21
6	Prome ...	26,067	298	302	600	23·02	117	109	226	392·62	360·93	376·67
7	Paungdè ..	14,154	190	206	396	27·98	71	51	122	373·68	247·57	308·68
8	Toungoo ...	19,332	250	224	474	24·52	53	33	86	212·00	147·32	181·43
9	Thayetmyo	10,768	84	83	167	15·51	37	32	69	440·48	385·54	413·17
10	Allanmyo ...	11,219	138	139	277	24·69	36	26	62	260·87	187·05	223·83
11	Bassein ...	42,563	613	534	1,147	26·95	185	160	345	301·79	299·63	300·78
12	Henzada ...	23,651	392	389	781	33·02	106	76	182	270·41	195·37	233·03
13	Thaton ...	15,091	229	201	430	28·49	64	29	93	279·48	144·28	216·28
14	Moulmein...	61,301	809	745	1,554	25·35	211	169	380	260·82	226·85	244·53
15	Tavoy ...	27,480	438	445	883	32·13	101	74	175	230·59	166·29	198·19
16	Mergui ...	17,297	256	246	502	29·02	101	75	176	394·53	304·88	350·60
17	PakOkku ...	19,507	281	261	542	27·78	90	66	156	320·28	252·87	287·82
18	Shwebo ...	16,050	156	146	302	28·48	63	42	110	435·90	287·67	364·24
19	Sagaing ...	11,858	214	223	437	36·85	35	52	87	163·55	233·18	199·08
20	Mandalay ...	148,917	3,625	3,395	7,020	47·14	1,264	1,013	2,277	348·69	293·38	324·36
21	Maymyo ...	16,553	309	286	595	35·93	63	56	119	203·88	195·80	200·00
22	Pyinmana	14,886	150	163	313	21·36	74	42	116	493·33	250·00	364·78
23	Myingyan	18,931	210	213	423	22·34	116	99	215	552·38	464·79	508·27

CHART I.

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BIRTHS AND DEATHS IN BURMA FROM 1865 TO 1923.

Birth rate Thus ... —○—○—
Death rate Thus ... -○--○-

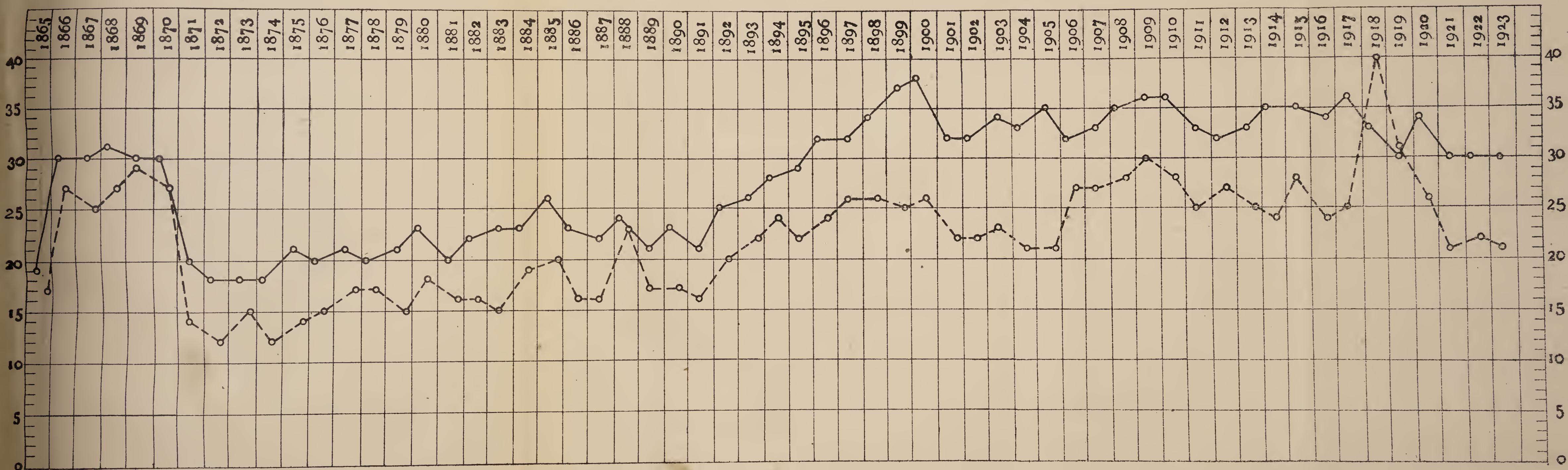
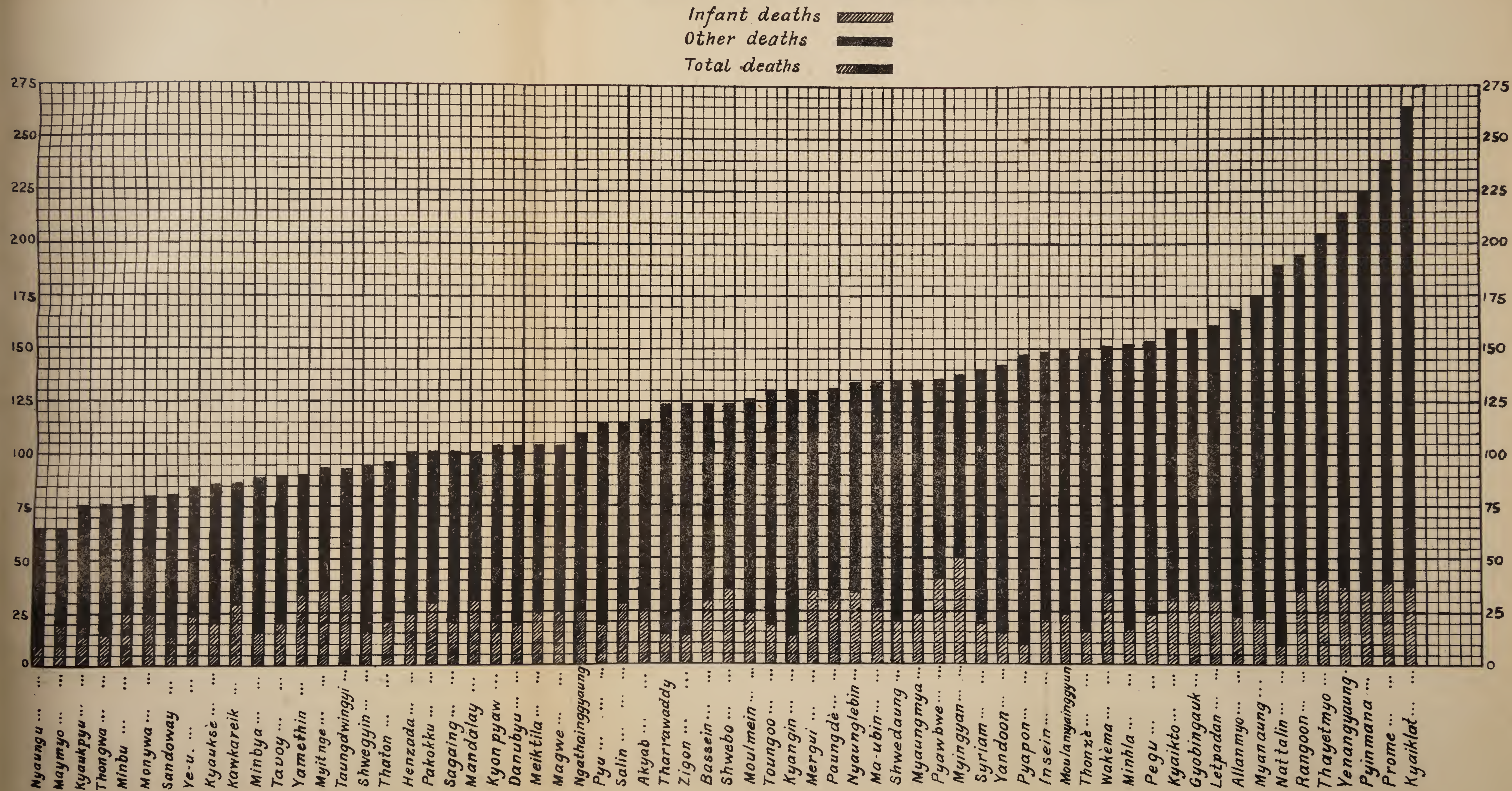




CHART II.

NUMBER OF DEATHS PER 100 BIRTHS IN TOWNS IN 1923.

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EPIDEMIC DEATHS IN REGISTERED AREAS OF BURMA FROM 1905 TO 1923.

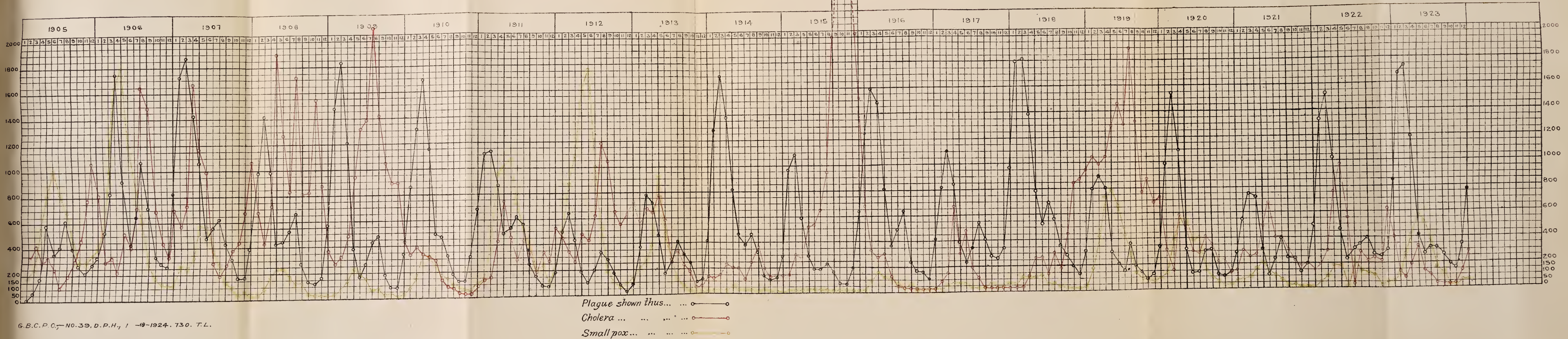


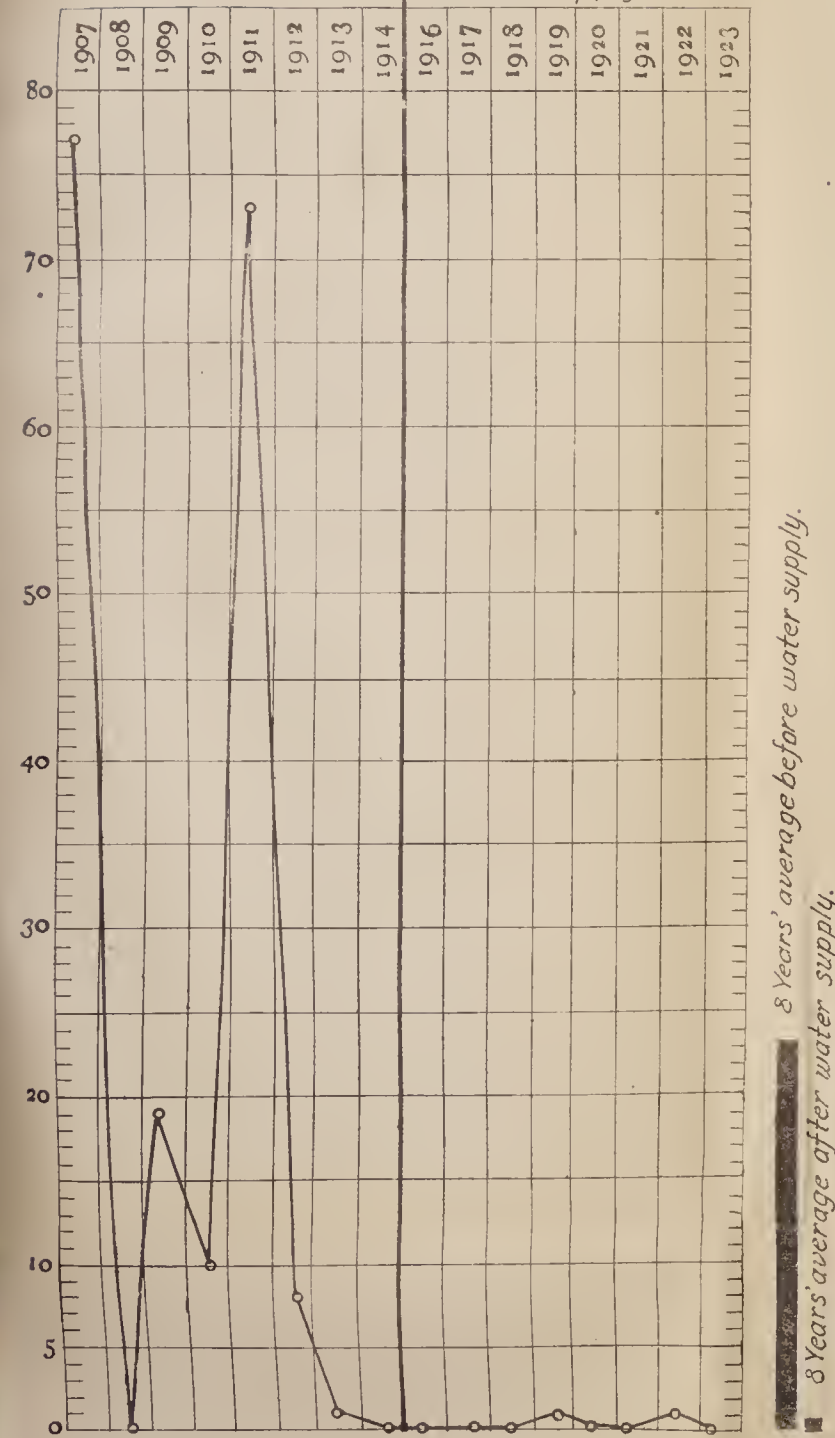


CHART IV. CHOLERA ACTUALS.

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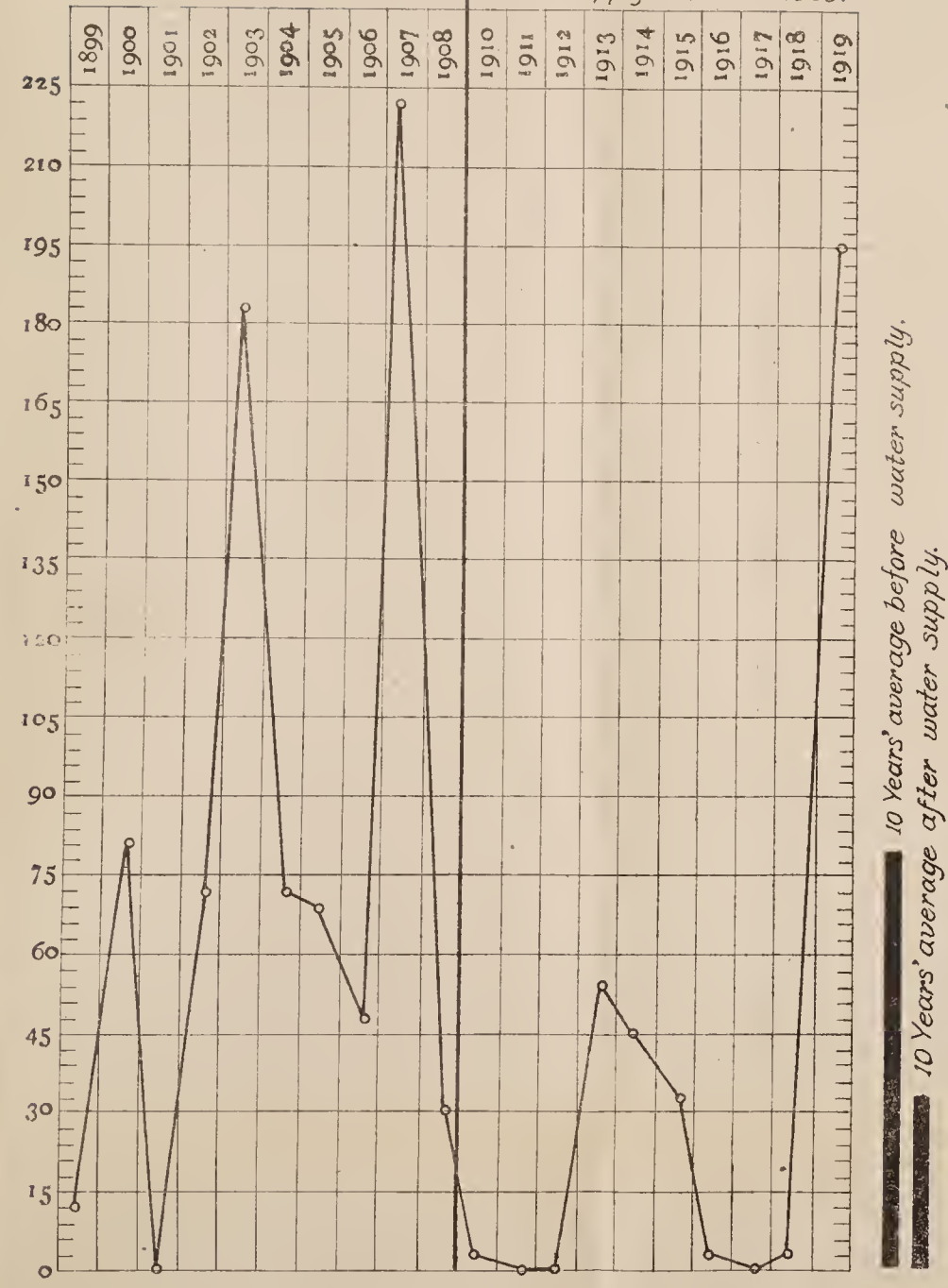
MONYWA TOWN.

Water supply in Nov. 1915.



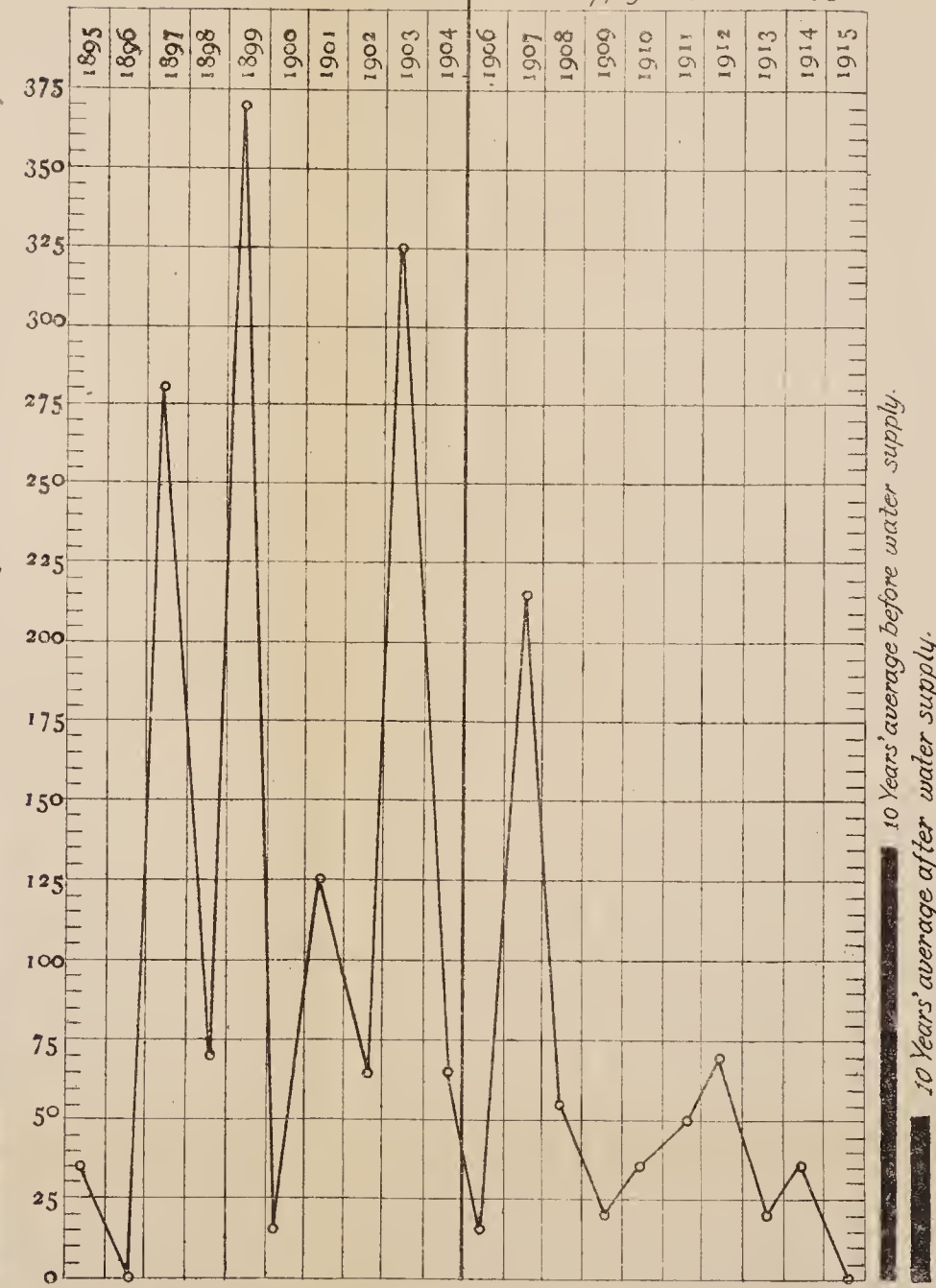
AKYAB TOWN.

Water supply in March 1909.



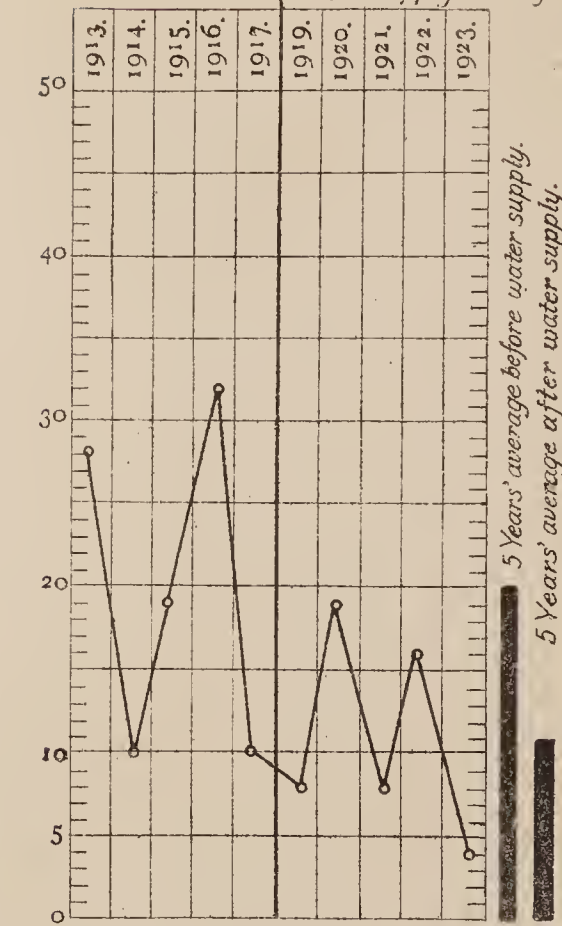
MOULMEIN TOWN.

Water supply in March 1905.



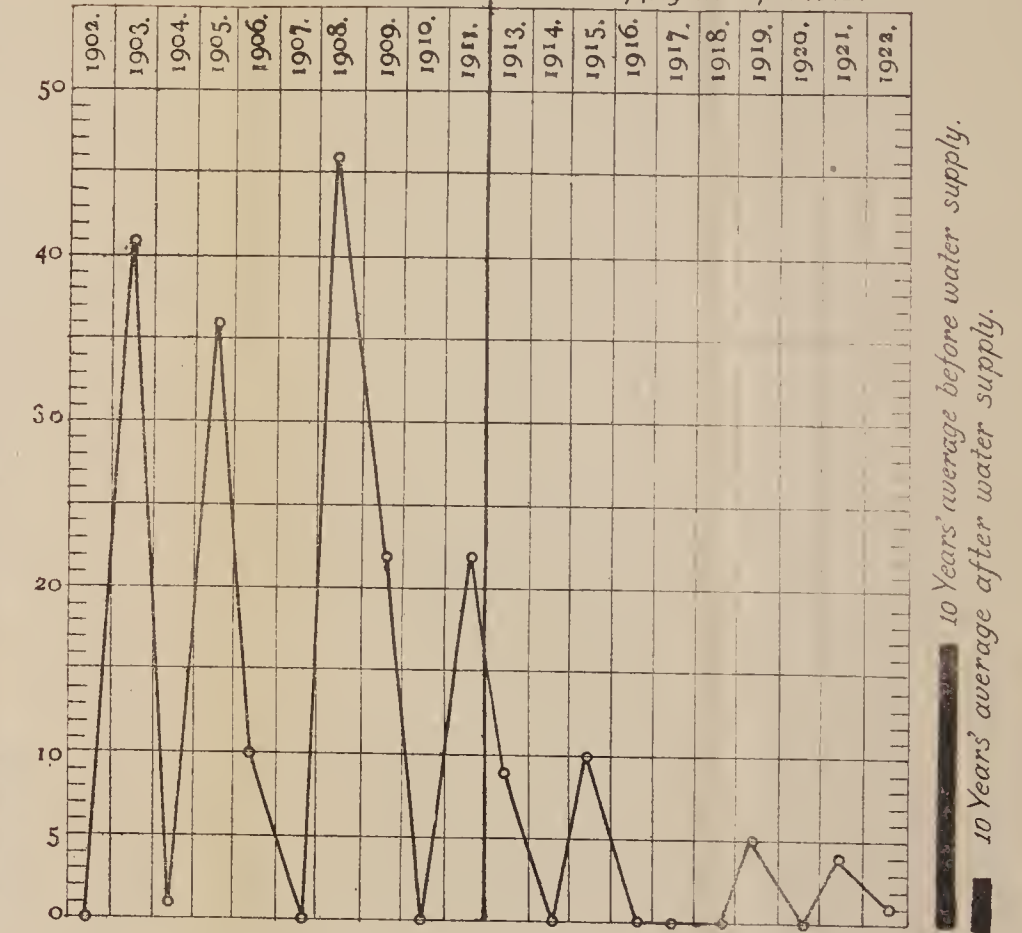
MA-UBIN TOWN.

Water supply in May 1918.



MINBU TOWN.

Water supply in Sept. 1912.







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